October 2019 • Issue #508

AMSTATNEWS

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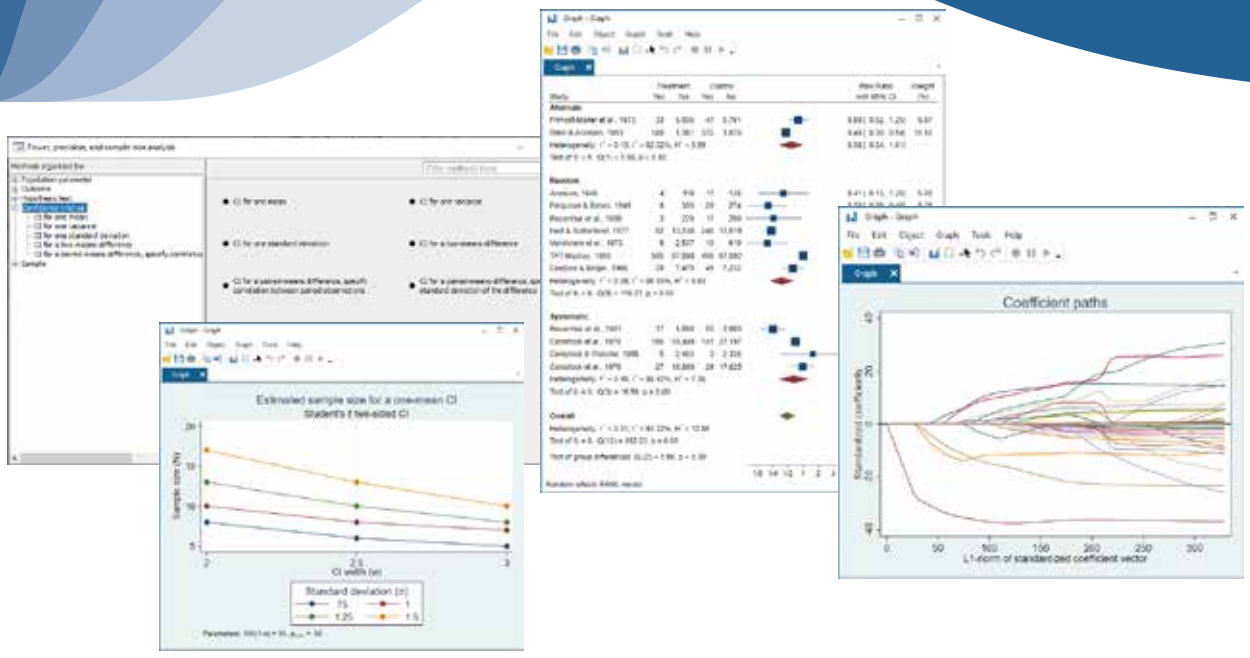

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OCTOBER 2019 • ISSUE #508

Amstat News welcomes news items and letters from readers on matters of interest to the association and the profession. Address correspondence to Managing Editor, *Amstat News,* American Statistical Association, 732 North Washington Street, Alexandria VA 22314-1943 USA, or email *amstat@amstat.org*. Items must be received by the first day of the preceding month to ensure appearance in the next issue (for example, June 1 for the July issue). Material can be sent as a Microsoft Word document, PDF, or within an email. Articles will be edited for space. Accompanying artwork will be accepted in graphics file formats only (.jpg, etc.), minimum 300 dpi. No material in WordPerfect will be accepted.

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The American Statistical Association is the world's largest community of statisticians. The ASA supports excellence in the development, application, and dissemination of statistical science through meetings, publications, membership services, education, accreditation, and advocacy. Our members serve in industry, government, and academia in more than 90 countries, advancing research and promoting sound statistical practice to inform public policy and improve human welfare.

features

NISS 'Statistics Serving Society' Forums on Gun Violence Honor Ingram Olkin

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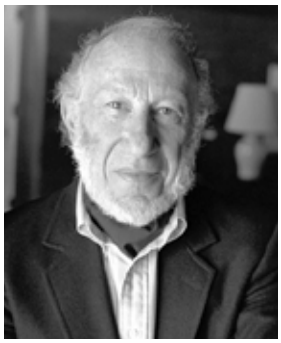

Ingram Olkin

columns

STAT*tr@k* is a column in *Amstat News* and a website geared toward people who are in a statistics program, recently graduated from a statistics program, or recently entered the job world. To read more articles like this one, visit the website at *http://stattrak.amstat.org*. If you have suggestions for future articles, or would like to submit an article, please email Megan Murphy, *Amstat News* managing editor, at *megan@amstat.org*.

This column is written for those interested in learning about the world of Data for Good, where statistical analysis is dedicated to good causes that benefit our lives, our communities, and our world. If you would like to know more or have ideas for articles, contact David Corliss at *davidjcorliss@peace-work.org.*

Giving Day Is November 1

Visit *www.amstat.org/givingday* to learn about what your donation on Giving Day can do and to find out how you can win one of our prizes this year!

In Memoriam

Sadly, the following members passed away recently:

Kenneth Hess, professor of biostatistics at The University of Texas MD Anderson Cancer Center, passed away July 26. His colleagues remember him as a kind, dedicated biostatistician who was committed to quality and safety.

Canadian statistician Marc Moore passed away on July 26, after losing a long battle with Parkinson's disease. He was a professor at École Polytechnique de Montréal from 1971 to his retirement at the end of 2002.

Statistical and engineering consultant Raymond Leigh Wilder passed away at his home surrounded by friends and family on August 21.

Read about these members online in the People section: *https://magazine.amstat.org/blog/category/membernews/amstatpeople/obits.*

Correction

In the August issue, the student photo was mislabeled in the article "ASA DataFest in Southern California Attracts Hundreds." The photo caption should have read "Chapman University students." Also, Ryan Millet's name was misspelled. We apologize for the error.

departments

Diversity Workshop and Mentoring Program Celebrates 10 Years

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member news

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On Becoming Indispensable

The voice on my radio at 5 a.m. one day last month was that of NPR's Noel King on Morning Edition:

> Picture this. In the early 1950s, a young guy is working at a desk deep inside the Federal Reserve Bank of New York. It's not exactly a corner office. And he complains to his wife that he has no future there at the Fed. He's not a banker. He's not a lawyer. He is a lowly economist. That is what life is like for economists in the 1950s.

Her guest, *New York Times* columnist Binyamin Appelbaum, elaborated:

> Nobody respects them, in part, just because economics was a new thing in the world. The idea that people could manage economic conditions, could improve economic conditions—these were new ideas in the world. … This quiet but really important revolution that happens, really, beginning in the late 1960s and the early 1970s, where economists begin to gain tremendous influence over public policy in the United States.

Noel King continued:

> In fact, that young economist who told his wife he had no future at the Fed, that was Paul Volcker. He became one of a small group of economists who made themselves indispensable to US presidents. Volcker rose to become the chairman of the Federal Reserve in the Carter and Reagan years.
>
> So I asked Appelbaum, how did a bunch of economists go from nobodies to being important people? And he said, "It's pretty simple. In an era of real economic problems, they promised solutions."

This last sentence reminded me of a statement made by Vijay Nair, D. A. Darling Professor Emeritus at the University of Michigan and head of statistical learning and advanced computing at Wells Fargo, during a conversation: "People in the real world are looking for solutions to problems—straight answers, not 'If …' or 'But …' or 'Maybe …'."

And people will listen to anyone who provides these answers. At a House Committee hearing last, titled "Raising the Bar: Progress and Future Needs in Forensic Science and Standards," Rep. Jerry McNerney asked, "How do you see AI methods as advancing the practice of forensic science?" It was a good question for those who understand AI (artificial intelligence) and ML (machine learning) methods as promises to solve all problems.

As statisticians, however, most of us are accustomed to working carefully through problems to ensure safe and reliable solutions. In his lecture as winner of the 2019 International Prize in Statistics (Kuala Lumpur, August 19, 2019), Brad Efron talked about prediction, estimation, and attribution. He noted that statisticians focus on estimation—estimation of the model and its parameters and standard errors, and attribution of the effects (significance testing) —whereas data scientists focus on prediction. And often the target is prediction for a specific set of circumstances, not for a general set of conditions that would require estimation. He shared some insightful views on the two disciplines.

Many people frame the "invasion" of data science as "How can we convince data scientists that we are data science?" Or, to use Efron's insight, "How can we do more prediction, as people want?" But I am not sure we want to go that route. Perhaps the question for us is rather, "How do we convince people they really want statisticians' insight, estimation, and valid inference from data?" How do we do what economists did in the 1950s—convince people, especially high-level decision-makers, that they cannot live without us?

I do not think all the recent attention on *p*-values will persuade people to listen to statisticians. (It may have the opposite effect. People may decide they don't need statistical methods at all.) Nor will waving a "credential" like "accreditation" (unless it's the Nobel Prize), nor overselling the methods we develop. We have been properly cautious when caution is appropriate. So what is the answer?

Appelbaum attributed the revolution in the world's view of economists to two important events: the failing US economy in the 1970s and the presence of an enormously influential economist named Milton Friedman. According to Appelbaum, Friedman's message was that government should reduce its role in

Karen Kafadar

MORE ONLINE
The link to the NPR story is: *https://n.pr/2lZyxTX*

MORE ONLINE
Read about the congressional hearing from September 10, 2019, at *http://bit.ly/2klEPN0.*

Visit *http://statweb.stanford.edu/~ckirby/brad/talks* to view Efron's lecture about prediction, estimation, and attribution.

Visit *http://bit.ly/2lXS4nE* to learn about the Fisher Data Science Curricula Frameworks.

the economy and put its trust in the markets to allocate resources. "And for a generation that is confronting the failure of the economy, this has enormous appeal," said Appelbaum.

I hope it does not take a failing economy for statisticians to be seen as indispensable and that we can find ways, during good times and bad, to prove our value and impact. Of course, some statisticians have risen to positions of indispensability: Janet Norwood (commissioner, Bureau of Labor Statistics, 1979–1991); Katherine Wallman (chief statistician, Office of Management and Budget, 1992–2017); Stella Cunliffe (director of statistics, UK Home Office, 1972–1977). How can the respect they earned as individuals be translated into recognition of indispensability for the entire profession?

People are drawn to experts when they see them providing solutions to their problems. As John Tukey wrote long ago, "Finding the right question is often harder than finding the answer." Indeed, we are quite good at that—especially when the proposed solution may be subject to serious, unanticipated biases that had not been recognized by others. We all have seen that, by calling attention to the shortcomings in a proposed approach or running a (possibly flawed) experiment or analyzing a (possibly biased) data set, statisticians have saved their collaborators much time and many resources.

We face an uphill battle with the explosion of data science. Recently, the International Data Science in Schools Project, chaired by Nicholas Fisher with 12 committee members from statistics and computer science, issued a report titled, *Curriculum Frameworks for Data Science*. Nick's committee offers frameworks that "will provide the basis for development of courses in introductory data science for students in their final two years of secondary school and of courses to teach teachers how to teach introductory data science."

After the ASA's successful efforts introducing statistics into grades K–12 (see *www.amstat.org/ASA/Education/K-12-Statistics-Education-Resources.aspx*), we may soon discover "statistics" is nowhere to be found in those grades while students all know what "data science" is—even if the concepts and methods they are learning such as "select appropriate numerical and graphical summaries to answer questions posed about a single feature/variable in a data set," "interpret numerical and graphical summaries in the context of the original problem to answer questions posed about the original problem and make discoveries" and "classify questions and hypotheses as to whether they apply to the sample at hand or to a larger population" (*Curriculum Frameworks for Data Science*, pp. 20–21) are those we learned as "statistics"! (It's a very thoughtful report, by the way.)

So, we face challenges: ensuring "statistics" does not become an obsolete term; enlightening data science administrators who think any class with data should be taught as data science; and reminding our colleagues we solve problems. We can tackle these challenges together. Here are some ideas, and I encourage you to contribute others.

First, we can all remind our data science colleagues that, when they are teaching statistical concepts, those concepts have been around for some time. They've been taught in statistics courses for the past few decades. (My colleague Jordan Rodu proposed a slogan for our department: "Statistics at UVA: We Put the Science in Data Science.")

Second, we can resurrect the many resources statisticians have developed for introducing data analysis and statistical concepts in the classroom. People might realize those resources, having been refined through years of use, may be more practical and suitable for their purposes.

And, most importantly, we can seek—and seize—opportunities to demonstrate our skills at solving problems—the bigger, the better.

Remember the economists; they took on the problems of the entire economy! Maybe we can convince the world that we statisticians can solve everyone's data problems and save the world. And then, instead of being "lowly [statisticians]" in dark offices, we will see our talents become indispensable to scientists and advisers and counselors, because we have proved ourselves repeatedly in areas like survey development and analysis, clinical trials, risk assessment, signal extraction, experimental design, physical modeling—areas in which other disciplines may have difficulty claiming expertise.

My dad used to say, "Bad times are good times for good people." The world's challenges may give us opportunities that will lead to good times for statisticians. We will have to work together to make that happen, and I welcome your ideas!

Highlights of the July 26–27, 2019, ASA Board of Directors Meeting

Members of the ASA Board take a vote during the meeting in Denver, Colorado. From left: James Lepkowski, Katherine Halvorsen, Mark Glickman, and Scott Evans. Photo by Eric Sampson/ASA

ASA President Karen Kafadar convened the ASA Board meeting at the Hyatt Regency Denver prior to the start of JSM 2019. The highlights of the board meeting follow.

Discussion Item

- ASA Director of Membership Development and Marketing Amy Farris reviewed with the board the many strategies staff uses to recruit and retain members. Then, the board engaged in a discussion about the ways policies such as membership categories, recruitment and retention resources, branding, and what items are provided to members only can affect membership. The results of the discussion will seed future discussions and possible policy changes.

Action Items

- The board approved a document, "Policies and Procedures for Reporting, Investigating, and Adjudicating Violations of the ASA's Activities Conduct Policy," subject to legal review and final vote by the Board Executive Committee. After final approval, this document will be printed in *Amstat News* and widely disseminated.
- The board extended the contract of ASA Executive Director Ron Wasserstein through August 2024.
- The board appointed Ruixiao Lu as treasurer for a three-year term, beginning January 1, 2020.
- The board formed a *CHANCE* task force to consider the future of the magazine and report at the next board meeting.
- The board decided that either Boston or Montréal will be the site of JSM 2026, with the final decision to be made in the fall by the Executive Committee after staff negotiates with those cities.

Reported Items

- ASA Associate Executive Director and Director of Operations Steve Porzio briefly summarized the ASA's financial activity through June 30, 2019. Finances are as expected for the first half of the year.
- ASA Treasurer Amarjot Kaur reported on the ASA's investments. She noted that due to the bull market, the ASA's portfolio had gained more than $2.4 million in value in the first half of 2019, reaching a market value of about $21.3 million.
- Amanda Malloy, ASA director of development, reported that, while overall giving is down in the US, giving at the ASA has been up. Not only did the ASA see its 11th consecutive year of increased giving in 2018, but 2019 is ahead of 2018. She also noted the official launch of the ASA GivesBack program. This is a new group of early-career statisticians and students whose purpose is to promote a culture of philanthropy.

2019 Board of Directors

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Mark Glickman, 1st-Year Council of Sections Representative

Cynthia Bocci, International Representative

Scott Evans, Publications Representative

Amarjot Kaur, Treasurer

Ron Wasserstein, Executive Director and Board Secretary

- The board received progress reports on the strategic initiatives launched by Kafadar. In addition, ASA President-elect Wendy Martinez updated the board on her ideas for 2020.
- The Council of Chapters Governing Board (COCGB) and Council of Sections Governing Board (COSGB) reported on their recent activities. The COCGB reviewed many matters, including plans for JSM, a new chapter reporting survey, chapter stimulus funding, and other resources for chapter success. The COSGB reported on a workshop for interest group officers and improvements to annual reporting, among many other activities.
- David Goldberg of Purdue University updated the board on the activities of the Math Alliance. The board continues to be interested in sponsoring activities of the alliance. Goldberg said he would keep the board informed of opportunities.
- Jim Rosenberger, director of the National Institute of Statistical Sciences (NISS), updated the board on NISS activities and continuing ways NISS and the ASA can collaborate. These two organizations have been partners for more than two decades.
- ASA Director of Strategic Initiatives and Outreach Donna LaLonde updated the board on the status of ASA salary surveys. She reviewed the history of salary surveys and indicated further discussion will take place in November.
- LaLonde also reported that student chapters continue to thrive, with more than 60 student chapters operating at present. The third annual student chapter leadership workshop was held at JSM this year. Students from Denver served as table hosts. Daniel Elchert, ASA science policy fellow, described his role at the ASA. The students discussed 21st-century skills and what the ASA can do to support development of those skills.
- ASA Science Policy Director Steve Pierson updated the board about the citizenship question on the decennial census, the status of changes to the Economics Research Service and National Institute of Food and Agriculture of USDA, ongoing issues at the Puerto Rico Institute of Statistics, and issues involving the National Center for Education Statistics. He also updated the board on the Count on Stats program and State of the US Data Infrastructure project.
- ASA Director of Education Rebecca Nichols described a few of the many ASA educational activities, including the educational ambassador program, review of the National Assessment of Educational Progress mathematics assessment framework, Meeting Within a Meeting, Beyond AP Statistics, What's Going on in This Graph, and Census at School. The board expressed delight and enthusiasm for the wide array of ASA investment in education at all levels.

The board holds it final meeting for 2019 November 22–23 at the ASA office in Alexandria, Virginia. ■

Study Reveals Gender Imbalance on (Bio)statistics Editorial Boards

Andrea Foulkes, MGH Research Institute

The results of a recent study reveal an apparent discrepancy in the numbers of males and females who serve on editorial boards of prestigious biostatistics and statistics journals. The overall proportion of females awarded doctorates in the United States has been consistently above 40% for the past 17 years. Yet, the overall proportion of female associate editors (AEs) for 12 top journals in statistics and biostatistics is just 24.6%.

The study, conducted by Andrea Foulkes, director of the biostatistics center in the division of clinical research at MGH Research Institute, was spurred by the fact that editorial boards of scientific journals are among the most influential bodies in the academy, as they collectively make critical decisions about the dissemination of research findings to the larger community. Members of these boards play a vital role in identifying referees and soliciting reports, evaluating the nuances and relative contributions of these reports, and ultimately discerning the suitability of manuscripts for publication. At the same time, membership to an editorial board is considered a significant milestone with respect to criteria for promotion at academic institutions, particularly from the rank of associate to full professor.

To begin this investigation, Foulkes—along with Mount Holyoke alumni Rachel Bostick, Regina Brecha, and Savannah Romeo—downloaded a listing of editorial board members for each of 12 top journals in statistics and biostatistics. While not comprehensive, these journals are representative in scope, ranging from novel statistical applications to statistical theory. The journal names and corresponding numbers of associate editors (AEs) are provided in Table 1. Sex was recorded as a binary variable based on visual assessments of online images or indicated pronouns. A sex determination was made in 633 of 642 cases (98.6% of AEs), and the impact of potential misclassification is expected to be small. For each journal, the proportion of female AEs was recorded. There was overlap in editorial board members across journals, so the reported proportions are not independent.

Table 1. Number of AEs and Academic Age Distribution by Journal

Journal	Number of AEs	Academic Age Median (IQR)
Annals of Applied Statistics	75	16 (11, 24)
Biometrical Journal	33	21 (15, 25)
Biometrics	78	16 (12, 24)
Biometrika	27	14 (8, 28)
Biostatistics	40	12 (8, 20)
JASA: Applications and Case Studies	40	17 (12, 23)
JASA: Theory and Methods	142	18 (15, 27)
JRSS, Series B (Statistical Methodology)	27	15 (12, 20)
JRSS, Series C (Applied Statistics)	18	12 (9, 18)
Statistical Methods in Medical Research	59	20 (12, 33)
Statistics in Medicine	61	19 (15, 27)
The American Statistician	42	22 (12, 26)
Total	**642**	**17 (12, 25)**

Table 2. Number and Percentage of AEs by Age Category and Sex

Academic Age Category	Female (%)	Male (%)	Total
(5,15]	79 (0.319)	168 (0.677)	248
(15,25]	47 (0.239)	146 (0.741)	197
(25,55]	14 (0.096)	132 (0.904)	146
Overall	**140 (0.237)**	**446 (0.755)**	**591**

To contextualize the results of this study, Foulkes also considered: (1) the distribution of academic age of AEs, defined as the number of years since receiving a doctoral level degree, and (2) the percentages of female doctoral degree recipients in the United States by discipline (biometrics/biostatistics, mathematical statistics, or statistics) from 1995 to 2017. Academic age data was collected from self-reported online resources (e.g., personal webpages and LinkedIn), and age is missing for 42 of 642 cases (6.5% of AEs.) The numbers of earned doctorates by discipline and year were taken from the National Science Foundation's National Center for Science and Engineering Statistics (NCSES) Survey of Earned Doctorates.

The proportions of female editorial board members by journal are provided in Figure 1. The percentage of female board members for all journals combined is 24.6%, represented by the dotted vertical line in Figure 1. The range across the 12 considered journals is 0.11 to 0.33. The solid vertical line in this figure

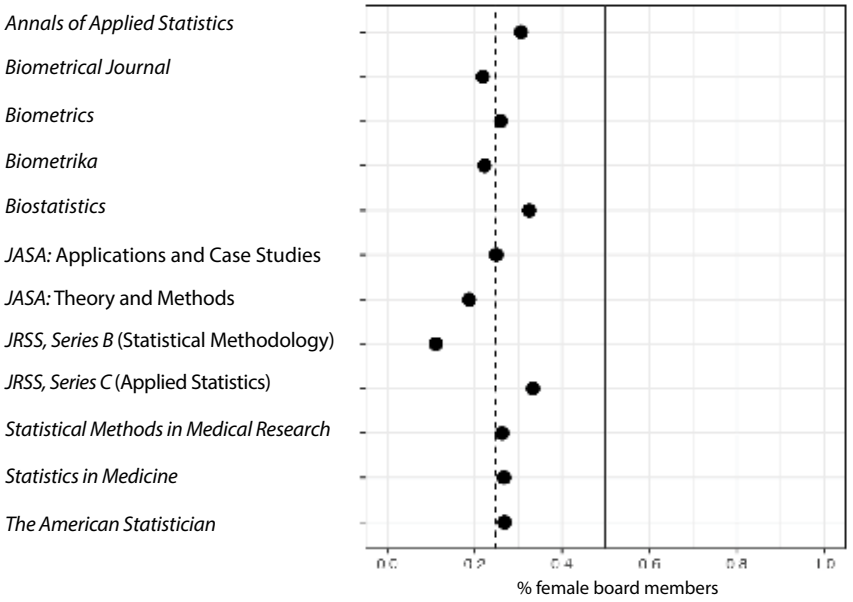


Figure 1. Percentage of female editorial board members for 12 top journals in (bio)statistics

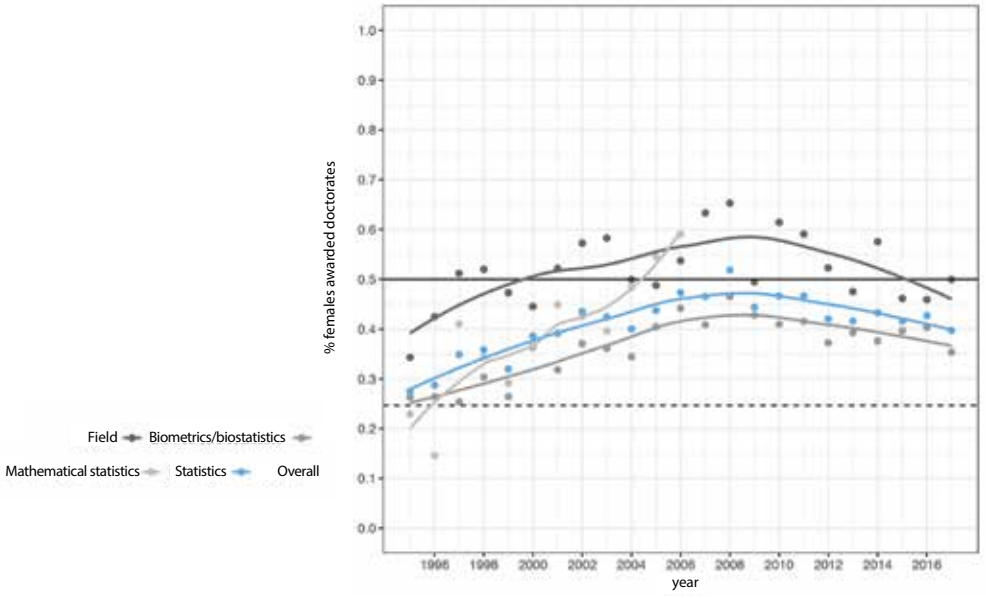


Figure 2. Percentage of females awarded doctorates in (bio)statistics by year

corresponds to an equal proportion of male and female board members. The median and interquartile range of academic age by journal is given in Table 1. The sample correlation between median academic age and percentage of female AEs is -0.23 [95% confidence interval (-0.71, 0.39)]. The numbers and percentages of AEs in each of three age categories by sex are provided in Table 2.

The percentages of women receiving doctoral degrees in biostatistics/biometrics, mathematical statistics, and statistics in the United States from 1995 to 2017 are illustrated in Figure 2. The statistics designation is available up to and including 2006. The fitted lines in this figure are based on locally estimated scatterplot smoothing (LOESS) overall and for each of the corresponding degree classifications. The dotted horizontal line represents the present-day percent of female AEs, and the solid horizontal line corresponds to an equal proportion of males and females. Since 1995, 5,494 individuals—including 2,228 women—earned a doctorate in biostatistics/biometrics, mathematical statistics, or statistics in the United States more than 10 years ago.

The overall proportion of females awarded doctorates in the United States has been consistently above 40% for the past 17 years. Moreover, in biometrics/biostatistics, this proportion has exceeded 50% in the majority of years since 1997, reaching a peak of 65.3% in 2008. Yet, the overall proportion of female AEs for the 12 considered journals is just 24.6%. This proportion is higher at 31.9% in the 5–15-year academic age category, though still not reflective of the proportion of females awarded doctorates in the corresponding period in the United States. Finally, although there is some variability in the proportion of female AEs across journals, the interquartile range (IQR) is fairly narrow at 0.221 to 0.278, and the female board membership is consistently less than 50%.

Editorial board membership requires substantial expertise in one or more areas of statistics and a broad network of colleagues from whom one can solicit referee reports. While it is difficult to quantify these attributes, academic age may serve as a reasonable surrogate. One limitation of this study is that Foulkes only considers doctorates awarded in the United States, while the proportion of females awarded doctorates outside the United States may be lower and editorial boards are composed of international scholars. In addition, Foulkes does not consider whether the proportion of doctorates awarded to women differ by rank of institution. However, she thinks the large number of females who earned doctorates more than 10 years ago, and the relatively high proportion in the United States, provides a significant opportunity to create parity in the editorial decision-making process. Rather than allowing editorial board membership to reflect a legacy of discrimination, Foulkes urges the leadership of scientific journals in (bio)statistics to take an active role in balancing the sex ratio of board membership by inviting more women to serve in this role. ■

Boston University to Hold Symposium on Statistics and Life Sciences

Josée Dupuis and Eric D. Kolaczyk

The Boston University School of Public Health, in coordination with the Biostatistics Department and the Department of Mathematics and Statistics, will jointly host a dean's symposium titled "Statistics and the Life Sciences: Creating a Healthier World" on November 15.

Co-hosted by the American Statistical Association, Institute for Mathematical Statistics, and National Institute of Statistical Sciences and open to attendees both in person and via webinar, the one-day symposium will feature short presentations and discussion of statistical challenges and progress toward solutions in a handful of emerging and mission-critical areas of the health sciences. Specifically, we will focus on digital health, machine learning in causal inference, and networks for public health.

The symposium will feature two plenary speakers—Joseph Lehar of Janssen Pharmaceutical Companies of Johnson & Johnson and Susan Murphy of Harvard University—and two keynote speakers—David Dunson of Duke University and Vadim Zipunnikov of The Johns Hopkins University. As a warm up for the symposium, each of the four speakers was asked a set of three questions central to the intended focus, seeking their thoughts about how statistics has most affected the health sciences in the recent past, what constitutes the biggest statistical challenges in the health sciences for the coming decade, and how we might best meet these challenges. Their responses are summarized below.

In what way do you feel statistics has had the biggest impact on the life sciences in the past decade?

The common response was that this impact was two-fold in nature, consisting of (i) support for the use of massive, diverse, and complex forms of data and (ii) the development of statistical machine learning methods for their analysis. Lehar noted how statistics has been key to "enabling the integration and analysis of very complex data sets across very diverse sources of information." As an example of the impact of machine learning, he highlighted the use of such methods "to automate classifying disease phenotypes that used to rely on subjective and imprecise expert opinions (e.g., deep neural networks on cancer pathology images or machine learning on molecular profiles to produce actionable clinical biomarkers for matching patients to therapies)."

Similarly, Dunson spoke of the transition from more traditional 'small data' to 'big data,' citing a host of new measurement technologies whose use is enabled by statistics—from single cell RNA sequencing to electronic medical records, and from mobile health devices to social media. Summing up, he stated, "Statistics has had a fundamental impact on this paradigm shift in the way life science is being connected; there is no use in collecting such data unless we have reliable and reproducible methods for analysis and interpretation. The development of 'big data' statistics has freed up scientists to be creative in developing and exploring new sources of data."

What do you think constitutes the biggest statistical challenge(s) in the health sciences for the coming decade?

Here, the responses were diverse, reflecting in many ways the diversity of interests and research areas among the speakers. Murphy, speaking from her perspective at the forefront of clinical trials design and analysis, asked, "How do we harness vast amounts of data—both from many individuals as well as on any one individual—to enhance and increase the impact of clinical trials?"

On the other hand, speaking from the vantage of his expertise in digital mobile health, Zipunnikov pointed to the challenges posed by the need to extract value and insight from the massive, complex, and diverse data resulting from "multi-system real-time monitoring of human physiology and ambient environmental exposure." He further commented, "[The] main analytic challenges are centered around the complexity of digital mobile health measures that are inherently intensively longitudinal, have different time scales, have different measurement, have differences in subjective interpretation of scales, exhibit huge between and within subject heterogeneity across days and weeks of observation, follow significant diurnal and weekly patterns, and often have substantial potentially informative missingness." All of which are further complicated by substantial cross-dependence among measurement modalities.

From the perspective of someone working across industry and academia at the frontier of oncology research, Lehar summed up in just two words: "incomplete data." He added, "Rarely do we have good coverage of enough data types across many patients. This limits the extent to which machine learning can be applied, and thus the problems we can address."

REGISTER
The symposium is free and open to the public to join in person or online. To register, visit *bu.edu/sph/stats-and-life*.

Finally, Dunson provided a general and sobering comment about statistics and the health sciences in general, saying, "It is definitely the case that the rapid pace of production of data of unprecedented size and complexity has overwhelmed the statistical community. We lack the necessary tools to properly analyze these data streams, and we lack the necessary pool of talent to implement current tools appropriately, while also developing transformative new tools in a data/science-driven manner." He further pointed to cultural challenges within statistics, particularly in contrast to culture in the broader machine learning community, professing that "the priorities in statistics departments in academia often run counter to meeting these challenges." The stakes are high: "The increasing focus on ML algorithms, instead of statistical methods having a formal framework for accommodating uncertainty quantification and dealing with critical issues such as selection bias, has been leading to a critical reproducibility problem in science."

What is needed to meet this challenge(s)?

Zipunnikov called for engagement of and by statisticians to meet the challenges he raised, saying, "The process of transforming data into knowledge is impossible without active intellectual participation of statisticians in major multidisciplinary efforts that focus on conceptualization, measurement, analysis, and treatment of myriad physiological, behavioral, and mental health conditions." As a positive example, he pointed to the mobile Motor Activity Research Consortium for Health (mMARCH) that he and others recently formed as an international network to leverage the potential of digital mobile health

In a similar vein, Lehar called for increased data sharing to address the challenge of incomplete data, noting too much of a tendency toward data 'silos.' Emphasizing the central importance of this step, he stated, "A more concerted effort to share data across diverse providers is essential to truly realize the dream of precision medicine."

Alternately, Murphy called for increased attention to the "development of conceptual ideas for harnessing big data in clinical trial design and execution." Further, she cited the need for "training in the underlying principles of trial design (e.g., going back to Fisher and Hill) combined with training in computational methods and statistical principles related to replicability."

Last, Dunson called for nothing short of a revolution, echoing other recent calls of a similar nature (e.g., the NSF Crossroads project): "We need to fundamentally revamp the statistics education curriculum to prepare students with high-quality tools for analyzing and interpreting the massive-scale complex data being routinely collected. We need to revamp the reward system in academics to favor the development of truly innovative methods that are actually of direct utility in analysis of large-scale scientific data sets over incremental methods with seemingly strong asymptotic support. Less focus on publication volume and more focus on impact/innovation of a few key publications in tenure decisions. We need fundamentally new ways of analyzing and interpreting data and more of a paradigm for appropriately dealing with truly complex data that require pre-processing and face computational challenges in storage, transfer, and processing."

The Boston University symposium promises to serve as a forum for discussion of these and other cutting-edge topics at the intersection of statistics and the health sciences in a format broadly accessible to the larger data science community. ■

FREE 2019 Seasonal Adjustment Practitioners Workshop Happening in November

The Government Statistics Section, Business and Economic Statistics Section, and Washington Statistical Society are sponsoring the third Seasonal Adjustment Practitioners Workshop (SAPW) November 20 at the Bureau of Labor Statistics in Washington, DC.

SAPW is a one-day conference for those who are actively involved in seasonal adjustment and related time series methods, providing an opportunity to share experiences in producing seasonal adjustments; give details of interesting time series estimation problems and possible solutions; discuss best practices in seasonal adjustment, time series modeling, or benchmarking; share lessons learned, tips, and shortcuts; present applied research in the practice of time series estimation; and network with others who face the same challenges. There is no charge to participate.

Jonathan Wright of The Johns Hopkins University will be the keynote speaker, presenting "Seasonal Adjustment of NIPA Data: Model-Based and Moving-Average-Based Approaches." Wright's research focus has been econometrics, empirical macroeconomics, and empirical finance, but his interests span a wide range of topics, including forecasting in a data-rich environment, the high-frequency effects of news announcements, term structure analysis, and the econometrics of weak identification. William Bell, senior mathematical statistician at the US Census Bureau, will be the discussant.

To participate in the workshop, submit an abstract of 100 or fewer words by October 15 to *esmd.seasonal.workshop@census.gov*. To attend, register by November 17 at *https://tinyurl.com/SAPW2019*.

STATS FROM THE ROAD

What's Your Why?

Amanda Malloy

This year, I've taken a page out of my three-year-old's book and have been asking "why" a lot. I'm on a mission to understand what motivates ASA members. Why do you do what you do?

At JSM this year, I asked people to write down their responses to a few questions: Why did you become a statistician or data scientist? Why do you choose to be an ASA member? Why do you choose to donate to the ASA?

I received great responses. Here are a few:

"Because now more than ever, we need to promote the importance of science." – Theresa Kim

"I'm an ASA member so I can collaborate with my peers on challenges that affect us all." – Richard Zink

"I'm a statistician to help make the world a better place for my family." – Erik Raab

"I am an ASA donor because I believe in putting my money where my heart is." – G. Jackson

Not surprisingly, there is a lot of overlap between members' "why's" and the ASA's "why." Of course, there is! The ASA is a membership association, and it is the members who drive the association's activities and focus. Giving Day, on November 1, is all about showcasing some of the reasons we do what we do and the impact of donations.

As Giving Day approaches, I would encourage you to think about your why and consider donating to show your support.

There are several fun contests we'll run throughout the day, such as the Early Bird and Donate and Share challenges. Winners from these contests last year received prizes like an invitation to the President's Invited Speaker Reception at JSM and an ASA goody box with a timeline of statistics poster, "Statistics Is My Superpower" water bottle, and other fun items.

Visit *ww2.amstat.org/givingday* to learn more about what your donation on Giving Day can do and how you can win one of our prizes this year!

Thank you for your support! ■

ASA®

Celebrating 180 Years

THE ASA IS TURNING 180 YEARS OLD IN NOVEMBER!

To celebrate, we are designating **November 22, 2019, ASA Day.**

Here's what to look out for during the ASA's birthday month:

Did You Know?
Facts about the ASA and its history.

I Can't. I'm Striking a Pose.
Answer our quizzes correctly and an ASA T-shirt could be in your future.

Haiku Who? Haiku You!
Write a haiku about the ASA's history or one that predicts the future of statistics. Once again, there might be a T-shirt in it for you …

Hello. It's Us.
A video message from the ASA Leadership.

I'm Kind of a Big Deal.
An exclusive discount on ASA membership for new members.

Visit ***www.amstat.org/asaday*** for more information.

Annual Report for the Washington Statistical Society

Tom Krenzke, WSS President (2018–2019)

The Washington Statistical Society (WSS) is the largest chapter of the American Statistical Association, with more than 1,000 members from government, academia, and the private sector. An active chapter, WSS offers opportunities for statisticians and data scientists to do the following:

- **Learn** through seminars and workshops and continue your own statistical education
- **Socialize** through networking with colleagues
- **Engage** in service by increasing the level of quantitative literacy in area schools and motivating and developing the next generation of statisticians

This past year, the theme was "Let's Get Together!" Included in Table 1 are the quarterly opportunities for the WSS statistical and data science community.

Table 1: Quarterly Opportunities

Quarter	Learn	Socialize	Service
3 2018	DC-AAPOR Conference	Informal meet and greet at JSM	Sign up as a mentor or mentee
4 2018	Hansen Lecture, Leadership Workshop	Hansen lecture reception, annual holiday party	Enlist in quantitative literacy activities
1 2019	President's Invited Lecture	President's Invited Lecture reception	Volunteer at science fairs
2 2019	Cox Award Seminar	Annual dinner	Award competition judging

Learn, socialize, serve—beyond those mentioned above, there are so many opportunities to highlight. In this summary, I mention a few of the major highlights and examples of others.

One of this year's features was the WSS mentoring program, which was started by current mentoring committee member Mark Otto about four years ago. The mentoring program, combined with various receptions, helps build relationships and community. This year, with Theresa Kim as chair of the committee, the number of mentoring pairs grew to 40. Other committee members included Erin Tanenbaum, Michael Messner, and Lloyd Hicks.

A second highlight was the leadership workshop, which was organized by Mark Otto, Eileen O'Brien, and Jennifer Parker and featured Gary Sullivan, Barry Nussbaum, and Sally Morton. The workshop gave statisticians greater awareness of leadership and helped chart paths forward on leadership development journeys.

Another focus was the efforts of the Diversity Committee, started in 2018 by Chapter Past President Linda Young and led by Mike Jadoo. Mike arranged several events with local universities, helping awareness and the size of WSS membership to increase.

Several technical seminars fostered learning in the following areas: agriculture and natural resources, data collection methods, data science and statistical computing, defense and national security, economics, education, human rights, privacy and confidentiality, public health and biostatistics, public policy, quality assurance, and social and demographic statistics. Highlights were the Hansen lecture by Roger Tourangeau with discussants Jill Dever and Kristen Olson, the WSS President's Invited seminar by Natalie Shlomo, and the Cox Award seminar by Courtney Kennedy.

The education committee, led by Carol Blumberg, sponsored several seminars. In addition, there were four short courses offered, which together involved about 140 participants. The short courses have been managed the past several years by Yang Cheng.

This year's social events helped facilitate a vibrant and diverse community. Activities started with a social event at the Joint Statistical Meetings in Vancouver. There were two other organized happy hour gatherings, one in Rockville, Maryland, and one in DC. The holiday party, receptions for the highlighted seminars above, and annual dinner provided an opportunity to interact with colleagues from different organizations, and each could not have been successful without the social arrangements led by Glenn White and Ed Mulrow.

Join WSS

The annual dues for joining WSS are the following:

ASA Member $10 (Full)

ASA Student Member $3 (Full-Student)

Non-ASA Member $10 (Associate)

Non-ASA Student Member $3 (Associate-Student)

Details about joining WSS are available at *washstat.org/joinus.html*.

There are many people who served and volunteered (including Dhuly Chowdhury (treasurer) and Will Cecere (secretary)) who deserve to be mentioned. The WSS poster competition and other quantitative literacy (QL) events and awards, such as the student travel award, are a large part of WSS. Maura Bardos led the QL activities, while Elizabeth Petraglia led the poster competition. Every year, WSS members judge data visualization posters submitted by DC-area students and students from all over the country who do not have a local chapter to judge their posters. This year, we received 256 posters. Our 11 judges selected 16 DC-area winners, two of which went on to also win awards in the national competition.

Our monthly newsletter, *The WSS News* (*http://washstat.org/newsletters*), has been managed by Colleen Choi for several years; our website (*http://washstat.org*) is maintained by Chris Moriarity. Each of these outlets provides announcements and descriptions of forthcoming events, volunteer opportunities, and listings of both job opportunities and the credentials of members seeking new positions.

The WSS mailing list has been managed by Vince Massimini since about 1994, according to the WSS history document, for which a new draft has been submitted for review by Dwight Brock.

Coordination of communication and social media outlets (e.g., Twitter and Meetup), handled by Phil Kalina, has been improved this year by WSS Communications Officer Leanna Moron.

I hope this gives you a taste for how active WSS is and provides you with encouragement to learn, socialize, and serve in the coming year.

If you have any questions about membership or participation in the WSS, email Tom Krenzke at *tomkrenzke@westat.com*. ■

REGISTRATION OPEN for Virtual Workshops on World of Blended Data

Registration is open for the free "world of blended data" series of virtual workshops. Register for the entire series or just a few. The Government Statistics (GSS) and Social Statistics (SSS) sections are hosting the series, offered as a part of the ASA Professional Development Program. It targets those who may not be able to travel to conferences but are interested in continuing education opportunities.

Each virtual workshop consists of a one-hour webinar followed by virtual participation in a group discussion and possible set of activities using data and code provided by the presenter. Every component is designed to educate on one aspect of blended data from an acknowledged expert in the field while focusing on applications to surveys and censuses (demographic and establishment).

The series will expose participants to the advantages of using combined data sources for developing inferential models and measures while remaining cognizant of the challenges associated with combining large data sets and the potential pitfalls of analyses of blended data, including privacy considerations. Participants will gain familiarity with commonly used machine learning software such as R and Python. Topics, presenters, and dates include the following:

Overview of Blended Data, given by Frauke Krueter, director of the Joint Program in Survey Methodology, University of Maryland, will emphasize applications of blended data in surveys and censuses. October 17, 3:00 p.m. EDT

How Rare Is Rare? The Importance of Validation, given by Aric LaBarr, associate professor, North Carolina State University's Institute for Advanced Analytics, will address useful and appropriate methods of model and results validation using blended data, introducing the target shuffling technique. November 21, 1:00 p.m. EST

Introduction to Python for Data Science, given by Hunter Glanz, assistant professor, California Polytechnic State University, will cover how to use Python for data manipulation in preparation for machine learning and present examples using open source government data. January 16, 1:00 p.m. EST

Interpretability vs. Explainability in Machine Learning for High-Stakes Decisions, given by Cynthia Rudin, associate professor, Duke University, will introduce interpretable machine learning models, which come with their own explanations that are faithful to what the model actually computes. These models are contrasted with black box models, presenting applications from the criminal justice system and health care. TBD

Differential Privacy, given by Matthew Graham, US Census Bureau Center for Economic Studies, will introduce differential privacy concepts with an emphasis on census data (as opposed to sample survey data). Special topics such as formal privacy protection for skewed populations and blended data considerations will also be addressed. TBD

This series began in September and runs through March 2020 (excluding December 2019). At its conclusion, GSS and SSS hope to organize a short series of case studies on real-life applications, also conducted virtually.

Contact Jenny Thompson, GSS chair-elect, at *Katherine.J.Thompson@census.gov* with questions or suggestions. ■

REGISTER ONLINE at *http://bit.ly/2kvtOJm.*

PRESENTERS


Frauke Krueter


Aric LaBarr


Hunter Glanz


Cynthia Rudin

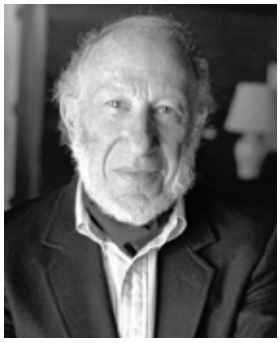
Not pictured: Matthew Graham

NISS 'Statistics Serving Society' Forums on Gun Violence Honor Ingram Olkin

Glenn Johnson, Lingzhou Xue, and James Rosenberger

Getting Involved

NISS is reconfiguring the Ingram Olkin Forum committee and seeking individuals interested in pursuing the distinctive hallmarks of inclusivity and societal impact through scholarship Ingram Olkin espoused by helping to identify and plan future forums. The NISS Ingram Olkin Committee looks to host additional events concerning topics having serious impact on society. Information about the gun violence workshop and future events, including event recordings, is available on the NISS website at *www.niss.org*.



Ingram Olkin

Ingram Olkin (1924–2016) was a principal founder of the National Institute of Statistical Sciences (NISS) and an internationally known statistician whose work stressed the importance of statistical thinking when studying major societal problems. He was professor emeritus and chair of statistics and education at Stanford University. Ingram was also admired for his inclusive mentoring approaches with junior researchers under his care and even individuals he had just met. In particular, he was known as an advocate for improving the status and number of women in academia.

Ingram's daughter, Julia Olkin, professor of mathematics at Cal State - East Bay, continues to support this spirit of caring and scholarship through her work with NISS. With the help of Julia and many others, NISS honors her father's memory by sponsoring the newly formed Ingram Olkin Statistics Serving Society (S^3) forums.

These forums intend to engage scientists and stakeholders in addressing the challenging issues facing contemporary society and exploring the roles statisticians and data scientists can play.

Inaugural Forum Focuses on Gun Violence

The inaugural S3 Forum was a two-day workshop held in Alexandria, Virginia, June 26–27. With the cooperation and support of the ASA and Statistical and Applied Mathematical Sciences Institute (SAMSI), this forum examined gun violence and invited statisticians to contribute to its understanding.

That gun violence persists as a vexing problem in the US needs little explanation. Numerous foundations and organizations have recognized more research is needed since adequate information and insight is lacking about the ownership and use of firearms, the causes and consequences of their use, and the effects of interventions and technological innovations. The sociological context and implications on health and law enforcement involve a variety of disciplines, and the spectrum of questions that arise affect policymakers at all levels. Implicit is that obtaining adequate information and understanding requires more research, data of high quality, and incisive analyses.

To address the twin concerns of adequate data and informative analysis, this forum assembled a working group consisting of criminologists and sociologists with experience in gun violence issues and statisticians with interest in and expertise to tackle these concerns. The program suggested there are many problems that beckon an increasing number of statisticians to get involved.

Emerging Data Sources

At the forum, both Erica L. Smith of the Bureau of Justice Statistics and Jonathan Lewin of the Chicago Police Department spoke about available data sources related to gun violence. The Department of Justice has a number of data collections available for use, but many challenges exist for obtaining reliable information from them. Exploiting recent innovative high-tech investments, the Chicago Police Department has begun systematically collecting, analyzing, and acting upon the data it collects regarding gun usage.

Trends in and Policing Gun Violence

A number of presentations provided participants with a broader understanding of the types of

investigations underway related to gun violence. Criminologists Charles Loeffler of the University of Pennsylvania and Rick Rosenfeld, Janet Lauritsen, and Ted Lentz of the University of Missouri-St. Louis all presented research evidence on how gun violence relates to the societal factors concerning both the perpetrators and victims of gun violence and the work needed to unravel these relationships. Philip J. Cook of Duke University described the importance of better investigations of shootings and differences in the reports depending on the existence of a fatality. And in a talk related to successful identification of shooters, Heike Hofmann of Iowa State University described recent advances in analyzing the striations on bullets as a means of identifying a unique source.

Assessing Gun Violence Risks and Evaluating Initiatives / Police Shootings

A number of presentations addressed the efforts and initiatives underway and programs in place to better understand these investigations. These speakers included the following:

- Terry Schell of the RAND Corporation, who identified the best models and their assumptions
- John MacDonald of the University of Pennsylvania, who described a randomized place-based controlled experiment demonstrating reduced gun violence
- Yifan Zhang of Stanford University, who talked about the LongSHOT initiative
- Jens Ludwig of The University of Chicago, who spoke about working with the Chicago Police Department
- David Hemenway of Harvard University, who reported on work investigating the use of firearms by police officers across states
- Greg Ridgeway of the University of Pennsylvania, who presented work analyzing the characteristics of officers involved in shootings

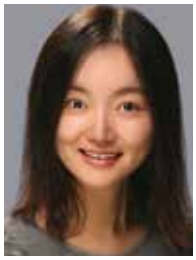
Roundtable Working Groups

After each session, participants took part in roundtable groups to discuss the presentations and consider additional research needed to improve the available evidence. The results from these discussions and the outcomes of the forum will be presented in a forthcoming white paper.

The principal purpose of the Ingram Olkin S^3 forums is to highlight an important issue and the opportunities for statistical involvement. It was clear this first forum was able to engage a substantial number of criminologists, statisticians, and others to begin thinking about and working to make connections across disciplinary lines that will help in understanding and mitigating the effects of gun violence. ■

STAT*tr@k*

My Path to Accreditation: How to Bolster Your Statistical Career



Jeanne Li graduated *summa cum laude* from Colorado State University with a BS in psychology. After completing her first MA in psychology from the University of California, Santa Barbara, she earned her second MA in statistics and graduated first in her class. She has been working as the research statistician at Santa Barbara Cottage Hospital for three years, applying her statistical knowledge to biomedical research.

Like many statisticians, I enjoy reflecting. These days, I've found myself reflecting upon the past few years working as the research statistician at Santa Barbara Cottage Hospital. Being an ASA member and accredited Graduate Statistician (GStat) has significantly helped me stay involved with the statistical community and continue furthering my technical and leadership skills in practicing statistics. I'd like to share with you why I joined the ASA and sought the entry-level GStat accreditation, as well as how I have been preparing myself for the full Professional Statistician (PStat) accreditation. I hope my experiences help you plan your career in statistics, especially if you are just beginning your statistics journey. Considering accreditation and professional activities early on may add value to your career as a statistician or data scientist and open doors to community and mentorship.

Though this is my first job after graduate school, it didn't take long to acclimate. A few months in and I was fully enjoying my part in collaborating with clinicians on medical research. But as I was (and still am) the sole research statistician in my organization, I felt the need to find a statistical community, so I could connect with peers, talk about career paths, and stay up to date on statistical developments. My supervisor encouraged me to look for a mentor in statistics and join a statistical association. I did some research, which is as much a hobby as it is a profession for me, and found the ASA.

As soon as I joined the ASA in 2017, the prospect of accreditation drew my attention. Not only would it provide a measure of assurance to my stakeholders, but it would also allow me to take continuing education courses at ASA conferences at a discounted rate—providing an extra incentive for my employer. As GStat only requires an advanced degree (PStat calls for a substantial amount of work experience), GStat was the right level of accreditation for me. I followed the instructions on the ASA website and put together an application. It wasn't long after that I had my GStat accreditation.

In addition to the aforementioned benefits, being a GStat provides the opportunity for my professional progress to be reviewed by members of the Accreditation Committee for full PStat status. The accreditation contact, Donna Lalonde, and I have bonded over my numerous inquiries (maybe a few more than she would have liked), and she has always given me quick and helpful feedback.

Since receiving my GStat accreditation, I've been actively preparing to apply for the PStat. Some of the requirements are straightforward, but nevertheless critical: You must be an ASA member, adhere to ethical standards, and meet educational and experiential requirements. Though these standards are important, I am going to focus on three additional PStat requirements as I share my experiences and tips with you.

Professional Competence

Evidence of professional competence may vary depending on where you practice statistics or conduct research, as almost every domain has a need for statisticians. For those who conduct research, whether in academia or industry, publications can be important, though not the only components necessary to demonstrate your professional competence. Toward this end, I have published a few peer-reviewed research articles and have a few under review.

As I have performed research in both graduate school and my current job, I have come to realize collaboration is a critical component in conducting and publishing quality work. Collaboration is invaluable, as you get to learn from and capitalize on each other's domains of expertise. On the flip side, there is the possibility complications can arise.

One experience that sticks out to me is collaborating with a resident physician on a viral infection study. The research process was going smoothly, and the preliminary results were presented at an infectious disease conference. However, as the doctor was about to move on to her fellowship program across the country, her availability for writing a manuscript became limited. I debated long and hard. I was not the lead or senior investigator on this project and did not want to overstep my role; however,

I had put a substantial amount of effort into the study and wanted to see it through to publication. I finally expressed my interest to both the resident physician and senior investigator and was able to take over and publish an original research article as the lead author.

My takeaways from this experience are the following: 1) make your goals known so others can help you accomplish them, which may also be in their interest, and 2) collaboration is a dynamic process, so don't shy away from opportunities when an emerging leader is needed.

Communication Skills

No matter how savvy a statistician or data scientist you are, if you can't get the message across to your audience in a way that is easily accessible to them, you will probably have a hard time affecting your colleagues and the business surrounding your work. I became conscious about improving my communication skills once I realized they are crucial on both a professional and interpersonal level.

To improve, I've read a few books about effective communication and public speaking. This has been tremendously helpful for learning tactics to engage audiences. You may have heard that speakers should start presentations with a joke or story to captivate their audience, but we are often too serious to make jokes and notorious for raining on the storytelling parade. In our defense, stories are anecdotal and often outliers, especially the good ones.

It took me a while to change this mindset. After all, when I communicate—or especially present—a topic, it's not about me or what I want to deliver; it's about what my audience can take away from what I deliver. Therefore, it's a good idea to tailor your communication style to your audience so the technical material you present can be received easily. Analogies can be a good alternative if you're not a natural storyteller. Your audience would appreciate a commonly understood analogy or one that is specific to their field.

Professional Development

Whether you're finishing your degree or just starting your statistical career, you've come a long way to be where you are today. However, it is not the end of your professional development journey. New methodologies in statistics emerge and advance quickly—and we need to keep up. Additionally, interpersonal career skills are usually not offered in graduate school, even though they are critical for professional success, not to mention moving up the career ladder.

To keep pace with statistical advances and connect with peers outside your organization, attend conferences. The ASA organizes many statistical conferences throughout the year. Personally, I have attended the Conference on Statistical Practice (CSP) and Symposium on Data Science and Statistics (SDSS), both of which were extremely beneficial. My favorite experiences include connecting with mentors and peers, attending short courses for formal continuing education, and hearing presentations from statisticians and data scientists whose work may be different from my own. I'm always fascinated by the cutting-edge methodologies we constantly develop and use in our field and the extent to which our work affects other sectors.

The ASA has been an eager advocate for statisticians pursuing leadership roles—one of my favorite topics to read about in *Amstat News.* Unfortunately, outside of MBA programs, career and leadership skills are often not taught in school and we have to pick them up on the job or through some type of formal training.

I was thrilled when I found out I was selected for a leadership program within my organization earlier this year. Health Professionals Institute is a rigorous program comprised of 17 courses and a capstone project. It is designed to cultivate emerging leaders. I'm well on my way and have learned so much about working with different personalities, having difficult conversations, and negotiating. If this type of career training is important to you, I recommend finding an employer that offers similar continuing education programs when you look for a job.

On the whole, earning my GStat accreditation and becoming involved with the ASA has made my statistical career a fulfilling journey thus far, and I am excited to pursue the PStat accreditation. I encourage anyone with a substantial quantitative component to their advanced degree to reach out to members of the ASA Accreditation Committee (see *ww2.amstat.org/committees/commdetails.cfm?txtComm=CBNORG01*).

I hope my experiences and advice from the world of statistics are helpful as you walk your own path. ■

STATS4GOOD

Joseph Gastwirth Receives Karl E. Peace Award for Betterment of Society

Getting Involved

September included the Day of Civic Hacking, when Data for Good volunteers in communities across the country gather to create data-driven solutions that make local government work more efficiently and effectively. This means October is the best time to put together a team and start planning for next year. You can learn more about the Day of Civic Hacking at Code for America (*www.codeforamerica.org*).

This is also recruiting season for summer interns. Most hiring companies will be involved in giving back to the community in some manner. University students interested in Data for Good can look for companies with a track record of using statistics for the greater good.

MORE ONLINE
Learn more about the Karl E. Peace Award and previous recipients at *http://bit.ly/2mlpkFF.*

With a PhD in statistical astrophysics, **David Corliss** leads a data science team at Fiat Chrysler. He is the founder of Peace-Work, a volunteer cooperative of statisticians and data scientists providing analytic support for charitable groups and applying statistical methods in issue-driven advocacy.

The American Statistical Association has awarded the 2019 Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society to statistician, author, and professor Joseph L. Gastwirth of The George Washington University (GW).

Established in memory of biostatistician and industry leader Karl E. Peace, the award is given each year to a person making "substantial contributions to the statistical profession, contributions that have led in direct ways to improving the human condition. Recipients will have demonstrated through their accomplishments their commitment to service for the greater good."

Gastwirth's work lies at the intersection of statistical analysis and the law. His career in statistics has focused on making an impact on peoples' lives through the law and the many ways it affects society. In giving the award, the committee noted Gastwirth's "distinguished career as a leading authority in the area of legal statistics, who has developed novel methodological and theoretical statistical approaches to address economic and health inequalities, to combat discrimination, and to advance civil rights and social justice."

As an author, Gastwirth's books have provided much-needed instruction for legal professionals on essential statistical concepts. He has also developed tools for statisticians working in the legal arena, including co-authoring the R package lawstat (see *http://bit.ly/2kEbFJp*). This package performs several statistical tests and creates plots, providing real-world examples drawn from law, economics, policy, and biostatistics. Additionally, he has developed mathematical methods to capture and assess difficult-to-quantify concepts such as fairness in financial dealings.

Gastwirth's early work focused on robust and nonparametric statistical methods. A long-time professor at GW, he became involved in the study of economic inequality—an area in which both robust and nonparametric methods are important. Statistical challenges in economic distributions and equality, in turn, led to statistics for law and policy. This resulted in teaching and writing for attorneys and law students, consulting on legal cases, and working on government policy. Gastwirth served as a visiting adviser to the Office of Management and Budget Office of Statistical Policy and a consultant for the Bureau of Labor Statistics on employment inequality. This work on the legal side of Data for Good led to consulting engagements and subsequent papers on statistical methods for law, including pyramid schemes and securities.

This lifetime of achievement in research and writing has had a wide-ranging effect on many areas. Beyond its impact in the courtroom, Gastwirth's work has been important to the development of data-driven policy on economic inequality, discrimination, and human rights. Steve Pierson, the ASA's Director of Science Policy, said, "I'm pleased that Joseph Gastwirth is the recipient of the Peace Award. Gastwirth's contributions to the betterment of society have been broad and immense. In my science policy work for the ASA, Gastwirth and his work frequently come up as examples of the impact of statistics and statisticians on policy issues."

To help people and establish justice, statistical human rights advocacy comes back to policy, practice, and law. This makes Gastwirth's work valuable in turning statistical studies into effective action. Examples described in the lawstat package include gerrymandering, where the effective power of a person's vote varies by voting district, and inequities in per-pupil student funding. While many might think of a Gini Index as a measure of economic disparity, it has no inherent economic tie and can be applied to variance in a variety of contexts. lawstat can calculate the Gini Index as a measure of unequal distribution and provide plots and visualizations to help explain statistical results of Data for Good projects to the nonstatistical audiences needed to deliver effective action on the problems we seek to address.

In an era when statistical science is politicized and weaponized, the Gastwirth focuses on using statistics to make a difference and better society. Working at the intersection of science and policy, his sound and reliable science for the greater good can both inspire and guide our work. ■

SDSS 2020 to Feature Refereed Submissions

David Hunter

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SYMPOSIUM ON
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BEYOND BIG DATA: COLLABORATION
IN SCIENCE, INDUSTRY, AND SOCIETY
PITTSBURGH, PENNSYLVANIA • JUNE 3-6, 2020

The 2020 Symposium on Data Science and Statistics (SDSS) in Pittsburgh will feature a new system of refereeing contributed papers modeled on the process used by several high-profile conferences, most notably in the computing community, that have become increasingly popular among statisticians.

The submission period will begin in December and last about a month. Details are forthcoming in a future issue of *Amstat News* and on the conference website at *ww2.amstat.org/meetings/sdss/2020.*

For those who may be unfamiliar with the merits of submitting to conferences as opposed to journals, the main benefits are quicker turnaround time and a rigid shorter format that can make manuscript preparation easier. In the case of many well-established conferences that attract thousands of submissions, there is also prestige associated with acceptance onto a conference program.

While we do not expect the first year of refereed submissions at SDSS to generate thousands, several data science–related journals have expressed interest in publishing the accepted manuscripts, which will increase the prestige of these acceptances.

The submission process, as well as the scientific program of SDSS in its entirety, will be organized into six tracks: machine learning, education, software and data science technologies, computational statistics, practice and applications, and data visualization. If you are doing work that might fit well into one or more of these data science–related tracks, you should consider submitting an abstract to SDSS.

Pittsburgh, Pennsylvania (stock photo)

The conference, to take place at The Westin Pittsburgh, will begin with a day of workshops and an evening mixer on Wednesday, June 3, and run through mid-afternoon on Saturday, June 6.

Located at the southwest edge of the Strip District (*www.visitpittsburgh.com/neighborhoods/strip-district*)—home to an assortment of restaurants, boutiques, old-style grocers, and more—The Westin is also less than a mile from the scenic confluence of the Allegheny and Monongahela rivers known as Point State Park, or simply The Point. We have paid attention to the survey responses of past SDSS attendees who hoped for more unscheduled time to experience the host city, and the downtown Pittsburgh location will allow ample opportunity to explore. Beyond the venue itself, Pittsburgh is home to several world-class universities and a thriving high-tech sector heavily influenced by data science.

In addition to submitted manuscripts, the SDSS 2020 program will consist of invited sessions, keynote addresses, and poster sessions. Stay tuned for details! ■

David Hunter

MORE ONLINE
Join the conference mailing list by visiting the SDSS2020 website at *ww2.amstat.org/meetings/sdss/2020.*

JSM2019

REMINISCING ON THE IMPACT

Rich Levine, JSM 2019 Program Chair

Let us reflect on yet another successful JSM, against a backdrop of the awe-inspiring Colorado Front Range. I will remember fondly riding the free mall shuttle up and down 16th Street, reveling in the JSM downtown signposts welcoming us to Denver, connecting with statistical colleagues lounging for a coffee break at the Hyatt, and being greeted by the big blue bear wanting to get in on our festivities. We for sure fulfilled ASA President Karen Kafadar's theme of *Statistics: Making an Impact* at the foothills of the Rockies!

The meetings got off to a smashing start with a jam-packed Sunday schedule. Nothing like starting the conference with your ABCs and CSI (the statistics version), featuring introductory overview lectures (IOLs) by Christian Robert on approximate Bayesian computation and Hal Stern on forensic statistics. The IOLs prepared attendees for more technical talks on these themes later in the week.

The second annual JSM Public Lecture was scheduled on Sunday evening to attract more local interest. That time slot was a huge success, as a standing-room-only audience enjoyed Mark Glickman's talk, "Data Tripper: Distinguishing Authorship of Beatles Songs Through Data Science." Glickman illustrated musical feature selection on his guitar as he quantified the probability that either Paul McCartney or John Lennon wrote certain Beatles songs. Eighth-grader Ray Levine shared his intrigue with the musical riffs to illustrate data science concepts. And 10th-grader Katherine Wang, an accomplished pianist and saxophonist, opined on the interweaving of machine learning and music theory, excited by the data science prospects.

This is the seventh year in which statisticians have gotten together for a pick-up basketball game during JSM. From left: Ryan Tibshirani of Carnegie Mellon, Rob Tibshirani of Stanford, Daniel McDonald of Indiana University, and Dave Zhao of the University of Illinois at Urbana-Champaign

JSM BY THE NUMBERS

6,674 Attendees
3,419 ASA Members
1,197 Professional Development Registrations
665 Sessions
70 Exhibiting Companies
455 Speed Presentations
473 Individual Posters

> "Coming off #JSM2019 I'm struck by how many smart, generous, innovative, and fun people I got to meet with and learn from. Feeling pretty lucky that I stumbled into stats and data science."
> Miles Ott • @Miles_Ott

The first day concluded with the traditional kick-off Opening Mixer, at which attendees took in the invited poster session, Data Art Show, and exhibit hall booths and snacks. The electronic posters featured themes this year: geophysical modeling, learning analytics, medical imaging/neurosciences, object-oriented data analysis, and uncertainty quantification.

Though a late first night, the excitement continued through the week for the 6,674 JSM attendees. Of particular note, JSM 2019 upped a number of records set at JSM 2018: number of abstracts, number of speed presentations, and number of posters. The latter two records are not surprising, given my "soap box invitation" toward this direction in a November 2018 *Amstat News* piece. I was excited to see not only the growing popularity of speed and poster sessions, but also the intense discussions and energy between speakers and individuals at the many poster sessions I attended.

Plenary Talks and Lectures

JSM 2019 featured talks and discussions on a wide range of statistical and data science topics of the day, including big data surveys, data science education, deep learning, reproducible research, statistical communication and collaboration, uncertainty quantification and visualization, and analyses of microbiome data and real-world data/electronic health records. And, of course, we had talks and discussions about the imminent Census 2020! The slides from many talks may be viewed via the online program at *ww2.amstat.org/meetings/jsm/2019/onlineprogram*. Let us highlight the plenary talks and lectures that played out through JSM week.

Florence Nightingale David Lecture: Susan Ellenberg

Deming Lecture: Nicholas Fisher

Following are the four plenary talks:

- **ASA President's Address and Awards,** Karen Kafadar, "Reinforcing the Impact of Statistics on Society"
- **ASA President's Invited Address,** Teresa Sullivan, "Coming to Our Census: How Social Statistics Underpin Our Democracy (and Republic)"
- **Deming Lecture,** Nicholas Fisher, "Walking with Giants: A Research Odyssey"
- **COPSS Awards and Fisher Lecture,** Paul Rosenbaum, "An Observational Study Used to Illustrate Methodology for Such Studies"

Additionally, JSM featured a number of named lectures (in alphabetical order):

- **Florence Nightingale David Lecture,** Susan Ellenberg, "Statisticians and the Evolution of the Randomized Clinical Trial"
- **IMS Presidential Address and Awards,** Xiao-Li Meng, "011, 010111, and 011111100100"
- **Medallion Lectures:**

  Yee Whye Teh, "On Statistical Thinking in Deep Learning"

  David Dunson, "Learning and Exploiting Low-Dimensional Structure in High-Dimensional Data"

  Helen Zhang, "Breaking the Curse of Dimensionality in Nonparametrics"

  Elizaveta Levina, "Hierarchical Communities in Networks: Theory and Practice"
- **Noether Lectures:**

  Matthew Reimherr, "Challenges in Privacy with Functional Data"

  Michael Kosorok, "Some Recent Developments in Precision Medicine"
- **Rietz Lecture**, Yoav Benjamini, "Selective Inference: The Silent Killer of Replicability"
- **Sirken Lecture,** Judith Lessler, "Is Survey Research a Fact-Based Endeavor?"
- **Wald Lectures,** Trevor Hastie, "Statistical Learning with Sparsity"

The goal of the IOLs, as the name suggests, is to introduce JSM attendees to state-of-the-art areas in statistics. We mentioned two IOLs earlier, though all six were aimed at introducing popular subjects seen throughout the JSM program. In order of offering at JSM were the following:

- **Michael Lavine** reintroduced the likelihood principle in "Assessing Procedures vs. Assessing Evidence," his perspective in this post $p<0.05$ era.
- **Jennifer Hill** and **Ari Rosen** presented "Causal Inference in Modern Statistics," a reoccurring topic each day of JSM given the advent of personalized medicine, electronic medical records, and big data in observational studies.
- **Walt Piegorsch** and **David Banks** presented "Modern Risk Analysis," hitting the modern data-analytic settings of environmental risk and adversarial risk.
- **Hollylynne Lee, William Finzer,** and **Beth Chance** presented "Pedagogy and Technology for Teaching Statistics," which was moderated by Allan Rossman and addressed students' statistics education needs for succeeding in this data-rich information age.

We had a unique late-breaking session this year organized by Xuming He. A panel including Bin Yu, David Banks, David Madigan, Dylan Small, Marianthi Markatou, and Michael Jordan discussed the findings from an NSF-sponsored workshop and project in "Statistics at a Crossroads: Who Is for the Challenge?" The panelists shared their perspectives on a vision for statistics in the next decade of this data science era while Nandini Kannan moderated.

Every year, memorial sessions honor recently deceased statisticians who had a major impact on our field. This year, we remembered and celebrated the lives of Larry Brown as organized by Tony Cai and Linda Zhao, Jayanta Ghosh as organized by Subhashis Ghoshal, Susanne Rassler as organized by Florian Meinfelder, Tom Short as organized by Allan Rossman, Herb Spirer as organized by Megan Price, and Joan Staniswallis as organized by Ori Rosen. The JSM program also featured sessions discussing the statistical legacy of David Blackwell, organized by Sastry Pantula, to celebrate Blackwell's 100th birthday; Larry Brown, organized by Chaitra Nagaraja, on his contributions to graduate student education; Florence Nightingale David, organized by Amanda Golbeck, as part of the new COPSS award; and W. Edwards Deming, organized by Joyce Orsini.

An Invitation

I will close by inviting you to get involved with JSM in any capacity you can. The experience is rewarding and the relationships you develop—I will predict with confidence—are rich and long lasting. I look forward to contributing to JSM 2020 and seeing everyone in the City of Brotherly Love next August! ■

MORE ONLINE
Plenary session webcasts are available at *https://ww2.amstat.org/meetings/jsm/2019/webcasts/index.cfm.*

View presentation slides at *ww2.amstat.org/meetings/jsm/2019/onlineprogram/index.cfm.*

Photos on this page by Eric Sampson/ASA

Many Honored at Presidential Address and Awards Ceremony

A special feature of the Joint Statistical Meetings is the ASA President's Address and Awards, during which the Founders Award winners are announced and the new ASA Fellows are inducted.

The 2019 Founders Award went to Nancy Flournoy, William I. Notz, Allan J. Rossman, Dalene Stangl, and David A. van Dyk.

Nancy Flournoy

University of Missouri

For leadership in statistics at the national level; for mentorship of women in statistics, including serving as a lifetime role model for countless colleagues as they began their careers and establishing NSF programs for women and minorities; for career-long service to the ASA, including instilling a new vibrancy into the Council of Sections at a critical time and serving on numerous committees, including chairing the Committee on Nominations and the Committee on Research Funding in Statistics and serving on the Fellows Committee, the Committee on Meetings, and the Committee on Women in Statistics.

William I. Notz

The Ohio State University

For outstanding section leadership, including serving as chair of the Physical and Engineering Sciences Section and Section on Statistical Education and as vice chair of the Council of Sections Governing Board; for outstanding publications leadership, including service as editor of *Technometrics* and the *Journal of Statistics Education (JSE)*; and for leadership in statistics education as a member of the ASA/MAA Joint Committee on Undergraduate Statistics, as chair and as executive committee member of the Statistics Education Section, as editor of *JSE*, and for his financial support of the Best *JSE* Paper Award.

Allan J. Rossman

Cal Poly - San Luis Obispo

For impact at all levels of statistics education as an officer of the Statistical Education Section, member and chair of the ASA/MAA Joint Commission on Undergraduate Statistics, contributor to the Beyond AP Statistics workshop series, member of the Statistics Careers for AP Statistics and Other K–12 Classrooms Working Group, and contributor to the ASA GAISE report; for serving on the editorial board and conducting a long-running series of interviews with leaders in statistics education for the *Journal of Statistics Education*; and for serving as the 2007 JSM Program Chair.

Dalene Stangl

Carnegie Mellon University

For advancing the cause of women in statistics through leadership of the Committee on Women in Statistics and founding of the Conference on Women in Statistics and Data Science; for leadership in ASA publications as the executive editor of *CHANCE*, the reviews editor for *JASA* and *The American Statistician*, and a member of the Committee on Publications; for leadership in the ASA's Statistical Education Section and Section on Bayesian Statistical Science; for extensive committee service as a member of the Membership Council, Youden Award Committee, Scientific and Public Affairs Advisory Committee, Media Experts Committee, and SPAIG Committee.

David A. van Dyk

Imperial College London

For pioneering leadership in the production and promotion of ASA journals and publications, including initiatives in electronic publication and reproducible research as editor of *Journal of Computational and Graphical Statistics* and reviews editor of *JASA* and *The American Statistician*; for significant contributions to the ASA's efforts to establish the role of statistics in data science, including the drafting of the ASA's statement on this topic; and for leadership of the Statistical Computing Section, service on the Publications Committee, and service on the ASA Board of Directors.

Photos on this page by Eric Sampson/ASA

2019 Fellows Photo by Eric Sampson/ASA

Each year, ASA Fellows are nominated by the membership and selected by the ASA Committee on Fellows. Fifty-nine Fellows were inducted this year.

Daniel W. Apley
Northwestern University

Huiman X. Barnhart
Duke University

Derek R. Bingham
Simon Fraser University

Babette A. Brumback
University of Florida

Ann R. Cannon
Cornell College

Hua-Hua Chang
Purdue University

Jinbo Chen
University of Pennsylvania

Gerda Claeskens
KU Leuven

Keith N. Crank
Part-Time Consulting

Catherine M. Crespi
University of California, Los Angeles

Yingying Fan
University of Southern California

Michael P. Fay
National Institute of Allergy and Infectious Diseases

Haoda Fu
Eli Lilly and Company

Mulugeta Gebregziabher
Medical University of South Carolina

Michele Guindani
University of California, Irvine

Sebastien J-P. A. Haneuse
Harvard T.H. Chan School of Public Health

Alexandra L. Hanlon
Virginia Tech

Miguel A. Hernan
Harvard University School of Public Health

Craig A. Hill
RTI International

Jianhua Hu
University of Columbia

Rebecca A. Hubbard
University of Pennsylvania

Peter B. Imrey
Cleveland Clinic

Hongkai Ji
Johns Hopkins Bloomberg School of Public Health

Jiashun Jin
Carnegie Mellon University

Katerina Kechris
Colorado School of Public Health

Charles L. Kooperberg
Fred Hutchinson Cancer Research Center

Eric Benjamin Laber
North Carolina State University

Michael Leo LeBlanc
Fred Hutchinson Cancer Research Center

Bo Li
University of Illinois at Urbana-Champaign

Jia Li
Penn State University

Yehua Li
University of California, Riverside

Jeff D. Maca
Bayer Pharmaceuticals

Nandita Mitra
University of Pennsylvania

Samuel Mueller
University of Sydney

Lei Nie
FDA

Davy Paindaveine
Université Libre de Bruxelles

Eun Sug Park
Texas A&M Transportation Institute

Judea Pearl
University of California, Los Angeles

Igor Prünster
Bocconi University

Brian James Reich
North Carolina State University

Jason A. Roy
Rutgers University

Cynthia Rudin
Duke University

Joseph L. Schafer
US Census Bureau

Jonathan Scott Schildcrout
Vanderbilt University

John Scott
DA

J. Michael Shaughnessy
Portland State University

David A. Stephens
McGill University

Tim Brian Swartz
Simon Fraser University

Sally W. Thurston
University of Rochester

Alexander Tsodikov
University of Michigan

Pei Wang
Icahn School of Medicine at Mount Sinai

William J. Welch
University of British Columbia

David Christopher Woods
University of Southampton

Min Yang
University of Illinois at Chicago

Xiangrong Yin
University of Kentucky

Menggang Yu
University of Wisconsin-Madison

Lanju Zhang
AbbVie

Mu Zhu
University of Waterloo

Hui Zou
University of Minnesota

Claire Kelling, winner of the 2019 Gertrude M. Cox Scholarship in Statistics Award

Steven J. Schwager accepts the 2019 Mentoring Award.

Honorable mentions for the 2019 Gertrude M. Cox Scholarship in Statistics Award (from left): Emily Hector, Sierra Merkes, and Sarah Ryan

Many more people were honored for their contributions to various causes that advance the field of statistics. Following are some of the awards and recipients:

Editor Appreciation Award

The following individuals were recognized for their work in publishing educational and insightful ASA journals:

Dan Apley
Editor, *Technometrics*
2017–2019

F. Jay Breidt
Editor, Reviews, *Journal of the American Statistical Association* and *The American Statistician*
2017–2019

Li Cai
Co-Editor, *Journal of Educational and Behavioral Statistics*
2015–2019

Scott R. Evans
Editor, *CHANCE*
2014–2019

Dan McCaffrey
Co-Editor, *Journal of Educational and Behavioral Statistics*
2015–2019

Gertrude Cox Scholarship in Statistics

Born in 1900, Gertrude Cox is fondly known as the "First Lady of Statistics" for her pioneering roles in the predominantly male-dominated discipline of statistics. Among her many accolades and accomplishments, she became the first woman—and the first person—to earn a master's degree in statistics from Iowa State University, where she was appointed assistant professor of statistics in 1939. In 1940, she became professor of statistics at North Carolina State University.

Jointly sponsored by the ASA Committee on Women in Statistics and the Caucus for Women in Statistics, the Cox scholarship has been presented annually since 1989 to encourage women to enter statistically oriented professions. This year's Gertrude Cox Scholarship went to **Maria Jahja** and **Claire Kelling.**

To **Maria Jahja**, statistics PhD student at Carnegie Mellon University, for academic success; for multiple interdisciplinary research achievements that strengthen data-driven decision-making in areas including education, industry, medicine, and public health, as evidenced by many publications, patents, and awards; for contributions to STEM outreach to middle- and high-school students; and for growing leadership activities in her local community.

To **Claire Kelling** for her extraordinary leadership and volunteerism in developing safe, supportive, and educationally rich environments, especially for girls and women, including participation in relevant state and national committees; for academic success in pursuit of a dual doctoral degree in statistics and social data analytics at The Pennsylvania State University; and for promising independent research in spatial statistics related to criminology.

Mentoring Award

The ASA Mentoring Award honors those recognized by their colleagues for their sustained efforts to champion the work and develop the careers of statisticians.

The 2019 ASA Mentoring Award honoree is **Steven Schwager** of Cornell University for more than 40 years of passionate dedication to the mentoring and personal and professional welfare of students, co-workers, and colleagues; for teaching and emphasizing that the role of statistician goes well beyond math and includes characteristics and values such as courtesy, respect, honesty, integrity, obligation, and

MORE ONLINE
Didn't make it to Denver? See pictures from the photo booth: *https://boothgallery.com/u/MiHi-Entertainment/JSM-2019-Spotlight-Denver.*

Photos on this page by Eric Sampson/ASA

Herbert Weisberg, accepts the W.J. Dixon Award for Excellence in Statistical Consulting. Photo by Eric Sampson/ASA

Nathan Tintle and Beth Chance accept the Jackie Dietz Best *Journal of Statistics Education* Paper Award. Not pictured are co-authors Jake Clark, Karen Fischer, George Cobb, Soma Roy, Todd Swanson, and Jill VanderStoep.

Peter Steiner, winner of the Causality in Statistics Education Award for the course "Design and Analysis of Quasi-Experiments for Causal Inference"

empathy; for inspiring and providing council for many to pursue statistics as a career path; for teaching and inspiring mentees to mentor others; for offering and providing support, encouragement, and council in matters of statistics, education, consulting, professionalism, and life; for pushing mentees to achieve as much as possible, commending our success, and telling us—when necessary—that failures occur for each of us but we should not allow them to define us; and for treating mentoring as his 'main job' with a 'life warranty.'

Be sure to check the section and chapter announcements for additional award honorees.

Photos on this page by Eric Sampson/ASA

Award of Outstanding Statistical Application

This award celebrates the authors of a paper that is an outstanding application of statistics in the physical, biological, or medical sciences. The 2019 Outstanding Statistical Application Award honorees are **Liangyuan Hu,** Icahn School of Medicine at Mount Sinai; **Joseph Hogan,** Brown University School of Public Health; **Ann Mwangi,** Moi University School of Medicine; and **Abraham Siika,** Moi University School of Medicine.

Causality in Statistics Education Award

Established in 2013 by Judea Pearl, professor of computer science and statistics at UCLA, this award recognizes the work of an individual or team that enhances the teaching and learning of causal inference in introductory statistics coursework. **Peter Steiner,** University of Wisconsin-Madison, and **Julian Schuessler,** Universität Konstanz, are jointly awarded the 2019 Causality in Statistics Education Award for their respective courses, "Design and Analysis of Quasi-Experiments for Causal Inference" and "Causal Graphs." Both well-designed courses introduce a range of course causal inference concepts accessibly and rigorously to students working in a range of applied sciences, and each makes an independent and complementary contribution to statistical education in causality.

Jackie Dietz Best *JSE* Paper Award

Established in 2011, this award is given to the best paper published in the *Journal of Statistics Education* from the previous year. The 2019 Jackie Dietz Best *Journal of Statistics Education* Paper Award honorees are **Nathan Tintle,** Dordt College; **Jake Clark,** University of Iowa; **Karen Fischer,** Mayo Clinic; **Beth Chance,** Cal Poly - San Luis Obispo; **George Cobb,** Mount Holyoke; **Soma Roy,** Cal Poly - San Luis Obispo; **Todd Swanson,** Hope College; and **Jill VanderStoep,** Hope College, for their paper, "Assessing the Association Between Precourse Metrics of Student Preparation and Student Performance in Introductory Statistics: Results from Early Data on Simulation-Based Inference vs. Nonsimulation-Based Inference."

Waller Awards

These honors—the Waller Distinguished Teaching Career and Waller Education awards—were established with a contribution from retired ASA Executive Director Ray Waller and his wife, Carolyn. The former recognizes an individual for sustained excellence in teaching and statistics education, and the latter honors an individual for innovation in the instruction of elementary statistics.

The 2019 Waller Distinguished Teaching Career Award honoree is **Robert L. Gould** of the University of California, Los Angeles in recognition of his many years of outstanding teaching and contributions to and creative efforts in statistical education.

The 2019 Waller Education Award honoree is **Benjamin Baumer** from Smith College in recognition of his outstanding contributions to and innovations in the teaching of elementary statistics.

JSM2019 IN PHOTOS

Attendees enjoy specialty house-made donuts near Spotlight Denver. Photo by Olivia Brown/ASA

From left: ASA President Karen Kafadar with winners of the Statistical Partnerships Among Academe, Industry, and Government (SPAIG) Award: Ethan Meyers, Andrea Foulkes, Nicholas Horton, and Benjamin Baumer. Not pictured: Krista Gile, David Jensen, Andrew McCallum, Sears Merritt, Nick Reich, Gareth Ross, and Amy Wagaman. Photo by Eric Sampson/ASA

From left: Jessica Utts, Nancy Geller, Teresa Sullivan, Karen Kafadar, and Lynne Billard. Photo by Eric Sampson/ASA

From left: 2019 Educational Ambassadors Carlos A. Diaz-Tufnio and Vikash R. Satyal with ASA representative Andrew Baughman
Photo by Eric Sampson/ASA

From left: Peter Bickel, Richard Lockhart, Jacqueline Hughes-Oliver, and Sastry Pantula during Professor David Blackwell's 100th Birthday Celebration: Impact on Diversity and Statistics Photo by Eric Sampson/ASA

W.J. Dixon Award for Excellence in Statistical Consulting

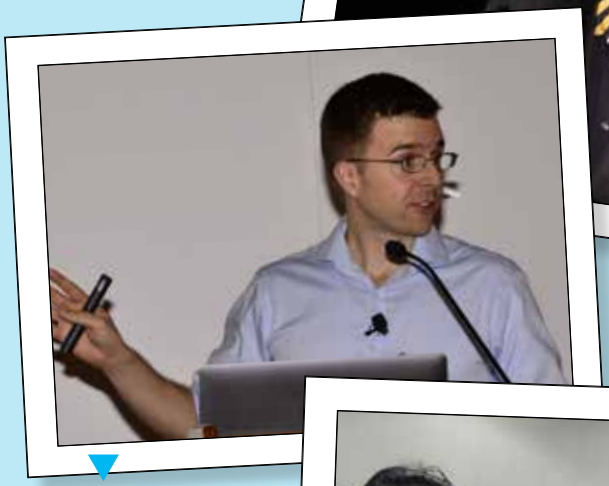
Established through a gift from the family of Wilfrid J. Dixon, this award recognizes outstanding contributions to the practice of statistical consulting. The 2019 W.J. Dixon Award for Excellence in Statistical Consulting recipient is **Herbert Weisberg** of Causalytics for his integrity and excellence in statistical consulting that fosters longstanding client relationships; for adding to the statistical body of knowledge and improving general statistical practice in varied areas of application; and for promoting greater understanding of statistical analyses through skilled, effective communication.

Karl E. Peace Award

The Peace award was established by Christopher K. Peace, son of Karl E. Peace, on behalf of the Peace family to honor the life work of his father. The 2019 Karl E. Peace Award for Outstanding Statistical Contributions for the Betterment of Society honoree is **Joseph L. Gastwirth** of The George Washington University

Attendees taste a variety of Denver microbrews in the Spotlight. Photo by Olivia Brown/ASA

Sudipto Banerjee (University of California, Los Angeles) accepts the George W. Snedecor Award. Photo by Eric Sampson/ASA



Continuing Ed: Garrett Grolemund presents Welcome to the Tidyverse: Reproducible Data Science with R. Photo by Eric Sampson/ASA

Narmadha Mohankumar of Kansas State University discusses her poster, "Accounting for Location Uncertainty in Model-Based Distance Sampling Methods." Photo by Olivia Brown/ASA

Attendees view pieces (left) "Rabbit" and "Banana" by Tom White during the Data Art Show. Photo by Olivia Brown/ASA

in recognition of a distinguished career as a leading authority in the area of legal statistics who has developed novel methodological and theoretical statistical approaches to address economic and health inequalities, to combat discrimination, and to advance civil rights and social justice.

Harry V. Roberts Statistical Advocate Award

In 2002, the Chicago Chapter established the Harry V. Roberts Statistical Advocate of the Year Award in honor of Harry V. Roberts, an exemplar of statistical advocacy. The award recognizes the accomplishments and contributions of those who have successfully advocated appropriate and effective uses of statistics and data-analytic approaches in business and the public sector. Additionally, the award recognizes the promotion of statistical reasoning by individuals who may or may not be statisticians.

The 2019 Harry V. Roberts Statistical Advocate of the Year Award honoree is **Howard Wainer.**

Samuel S. Wilks Memorial Award

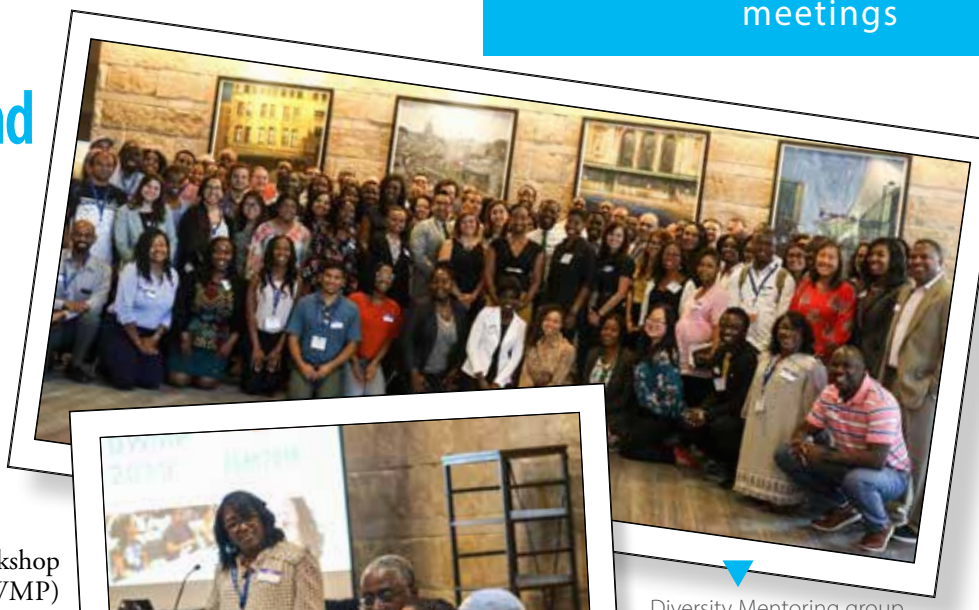
The Wilks award honors the memory and distinguished career of Samuel S. Wilks and is bestowed upon a distinguished individual who has made statistical contributions to the advancement of scientific or technical knowledge, ingenious application of existing knowledge, or successful activity in the fostering of cooperative scientific efforts that have been directly involved in matters of national defense or public interest.

The 2019 Wilks award honoree is **Alan E. Gelfand** of Duke University for fundamental breakthroughs in Bayesian statistical theory and methods and his enrichment of the discipline through outstanding contributions to mentoring, teaching, service, and administration. ■

Diversity Workshop and Mentoring Program Celebrates 10 Years

Developing Leaders, Growing Community, and Ensuring a Diverse Profession

Dionne Swift and Brian Millen



Diversity Mentoring group

Dionne Swift moderates "Success Is Not Always Perfect" with panelists (from left) Lloyd Edwards, Renee Moore, and Elvis Martinez.

Members of the JSM Diversity Workshop and Mentoring Program (DWMP) Planning Committee gathered at the Denver Hilton on the morning of July 28. In the coming hour, they would greet more than 110 statisticians and data scientists, there to participate in the 10th anniversary of the program. The committee members had spent months recruiting speakers and mentors, setting the agenda, screening applicants, and securing needed funding. It was time to see it all come together.

Over the next 10 hours and coming days, students and early- to mid-career professionals from underrepresented groups engaged in interactive sessions such as the following:

- Success in Graduate School
- Transformational Leadership
- Career Success: Tips and Traps
- Influencing Without Authority
- Strategic Networking
- Developing Successful Mentoring Relationships
- Effective Presentation Skills
- Building Your Online Brand
- Interview and Career Search Tips

Renee Moore of Emory University, Lloyd Edwards of the University of Alabama at Birmingham, and Elvis Martinez of Travelers Insurance shared lessons from struggles they endured during their career journeys and encouraged participants to embrace the message in each challenge they face, leverage mentors, and persevere through adversity.

DWMP speakers and panelists included established and emerging leaders in the statistics profession. Among them were Sally Morton (ASA president, 2009), Sastry Pantula (ASA president, 2010), Dionne Price (ASA vice president-elect, 2021), Rob Santos (ASA president-elect, 2021), and leaders from other statistics/biostatistics societies, as well as academic chairs and senior leaders from the government and private sectors. Notably, multiple alumni of the program served as speakers or panelists, underscoring the impact the program has had on developing today's leaders.

Overall, 34 mentor-mentee pairs were matched for 1-1 mentoring sessions, making this the largest DWMP to date. Reflecting on the program, DWMP Co-Chair Brian Millen remarked, "While the growth of the program and the many firsts realized on this 10th anniversary are significant, what's most important is what those statistics represent: Our profession is growing stronger—with an engaged and diverse population base whose impact will be tremendous! We look forward to the program's continued impact on our profession for many years to come, and we are grateful for the many individuals and organizations who have served or supported the program over the past 10 years. Together, we are ensuring a bright future for our profession."

For more information about the JSM Diversity Workshop and Mentoring Program, contact Dionne Swift, chair of the ASA Committee on Minorities in Statistics, at *swift.dp@pg.com*. ■

2019 DWMP BY THE NUMBERS

4 Days of Interactive Sessions
6 Corporate Sponsors
8 Sponsoring ASA Sections
34 Mentor-Mentee Pairs
>110 Program Participants

MORE ONLINE
To view the 2019 DWMP agenda, including session abstracts, visit *https://community.amstat.org/cmis/events/dwmp/dwmp2019.*

COPSS Honors Four with Awards

Huixia Judy Wang, COPSS Treasurer/Secretary

Bhramar Mukherjee (left) and Alicia Carriquiry present Paul R. Rosenbaum (University of Pennsylvania)with the Fisher Award and Lectureship. Photo by Eric Sampson/ASA

Bhramar Mukherjee (left) and Lynne Billard present the Florence Nightingale David Award to Susan Ellenberg (University of Pennsylvania). Photo by Eric Sampson/ASA

The Committee of Presidents of Statistical Societies (COPSS) presents awards annually to honor statisticians who have made outstanding contributions to the profession. For 2019, four awards were presented at the Joint Statistical Meetings in Denver on July 31 by COPSS Chair Bhramar Mukherjee and the award committee members.

Hadley Wickham of RStudio is the winner of the 2019 Presidents' Award. (See the interview with Wickham on the following page.)

Susan Ellenberg of the University of Pennsylvania is the 2019 F.N. David Award winner and first F.N. David Lecturer. This award, sponsored jointly by COPSS and the Caucus for Women in Statistics, is granted biennially to a female statistician who serves as a role model to other women by her contributions to the profession through excellence in research, leadership of multidisciplinary collaborative groups, statistics education, or service to the professional societies.

Ellenberg's award citation reads "for impactful leadership roles at the NIH, FDA, and the University of Pennsylvania developing and evaluating new methodologies and specialized approaches to improve the conduct of clinical trials; for influencing ethical practice and leading development of important regulatory policies; for leadership in setting standards for clinical trial data-monitoring committees; for senior statistical leadership for many multicenter clinical research network clinical trials; for distinguished leadership in numerous professional societies and national and international committees addressing major public health challenges; and for serving as an exceptional academic role model for faculty and students."

Ellenberg's lecture was titled "Statisticians and the Evolution of the Randomized Clinical Trial."

Paul R. Rosenbaum of the University of Pennsylvania is the recipient of the 2019 R.A. Fisher Award and Lectureship, which honors both the contributions of Sir Ronald Aylmer Fisher and the work of a present-day statistician for advancement of statistical theory and applications. This annual award recognizes outstanding scholarship in statistical sciences that has had a highly significant impact on scientific investigations.

Rosenbaum's award citation reads "for pioneering contributions to statistical methodology for observational studies, important applications of such methodology to health outcomes studies, lucid books on statistical principles and methodology for observational studies, and excellent mentoring."

Rosenbaum's lecture was titled "An Observational Study Used to Illustrate Methodology for Such Studies."

Sudipto Banerjee of the University of California, Los Angeles is the recipient of the 2019 George W. Snedecor Award. Granted biennially, the award honors an individual who was instrumental in the development of statistical theory in biometry with a noteworthy publication in biometry within three years of the award date.

Banerjee's award citation reads" for foundational contribution to the field of biometrics, especially for groundbreaking and fundamental work on Bayesian hierarchical modeling and the analysis of large spatial data sets; for significant contributions to the mapping of disease incidence in space and time and the analysis of environmental exposures."

Banerjee won the award for her publication, jointly written with A. Datta, A.O. Finley, and A.E. Gelfand, titled, "Hierarchical nearest-neighbor Gaussian process models for large geostatistical datasets," which appeared in the *Journal of the American Statistical Association*. ■

Hadley Wickham
Wins Prestigious COPSS Presidents' Award

Hadley Wickham, chief scientist at RStudio, was honored with the 2019 COPSS Presidents' Award at JSM in Denver. This award is presented annually to a young member of one of the COPSS participating societies in recognition of outstanding contributions to the profession.

Wickham's award citation reads "for influential work in statistical computing, visualization, graphics, and data analysis; for developing and implementing an impressively comprehensive computational infrastructure for data analysis through R software; for making statistical thinking and computing accessible to large audience; and for enhancing an appreciation for the important role of statistics among data scientists."

Huixia Judy Wang, COPSS secretary/treasurer, took a moment to ask Wickham several questions, which he answers here.

Which part of your job do you like the most?

I love the freedom to work on problems that I think are the most important. I love the mix of thinking, programming, and educating that enables me to discover problems, propose solutions, and then get them into the hands of real people. I love working from home and having the ability to spend focused hours on challenges that need deep attention. I love working with a talented team with diverse skills and backgrounds. Compared to my previous job in academia, I love that I don't have to write grants or attend faculty meetings 😉.

What advice would you give to young people who are entering the profession as PhD students and assistant professors at this time?

Consciously work to improve your programming and marketing skills. In your career, you are likely to receive little (or no!) formal training in these areas, but they are force multipliers: writing software allows many others to take advantage of your ideas, and learning how to market yourself and your work ensures that people know that you're making something that can help them. Academics sometimes see marketing as something dirty, but if people don't know that your work exists, it can't help them!

What one aspect of your research do you wish was more widely known in the scientific community?

The importance of tidying your data: Regardless of how you have recorded your data, your analysis will go much more smoothly if you first "tidy" it up, making sure that each column is a variable (and hence each row is an observation). Getting your data into this form up front will save you a bunch of time if you're using the tidyverse, R in general, or pretty much any other data analysis tool.

Who are your most significant mentors? How did/do they impact your career?

Di Cook, professor of business analytics, Monash University. Di was my PhD adviser, and I have the rare privilege of knowing that there's nowhere in the world that would have been a better fit for me. As well as giving me the freedom to work on topics that were pretty weird for statistics, Di also taught me pretty much everything I know about the art and science of data analysis. Di has done groundbreaking work in visualization, including tools for interactive graphics and graphical inference. She is a wonderful mentor, and many of her students have gone on to be very influential. Di is a role model for me, as she has a passion for learning and has continued to master new skills throughout her career.

JJ Allaire, CEO, RStudio. Soon after I joined RStudio, I decided that I needed to really learn C++ so that I could write faster code, and JJ was a skilled and enthusiastic mentor. One of the greatest compliments I've ever received is JJ telling me that I'm a more-than-intermediate C++ programmer! JJ is not just an amazing programmer; he's also a skilled technical writer and a savvy entrepreneur. JJ has helped me substantially improve my ability to make an impact on the world through software.

Hadley Wickham accepts the COPSS Presidents' Award. Photo by Eric Sampson/ASA

Why were you drawn to statistical computing and software development?

I was drawn to computing at a young age, particularly using computers to help organize data. When I was in high school, I converted my mum's handwritten recipes into a database (which still exists today at *http://recipes.had.co.nz*!) and, throughout my career, I've [been] fascinated by how to turn raw data into rich, informative displays that lead to better decisions. Trying to help people make better visualizations with less pain and more joy has led me to push my work further and further toward the raw data.

Anything else you'd like to share about our profession?

I have found data science to be a deeply rewarding field. These days, I spend most of my time developing tools for others to do data science, but I still love getting my hands dirty with real data. I really enjoy the combination of technical and human skills that are required to be an effective data scientist.

Finally, what are your hobbies/interests beyond statistics?

Outside of statistics, I love to bake, barbeque, and make cocktails. I also read a lot of science fiction and fantasy and practice yoga. ■

MORE ONLINE
Learn more about Wickham at *http://hadley.nz.*

A Conversation with Anirban Basu

The International Conference on Health Policy Statistics (ICHPS) has played a vital role in the dissemination of statistical methods in health policy and health services research throughout the past 20 years. In preparation for the next conference, which will take place in January 2020, we're running a series of interviews and articles about previous Health Policy Statistics Section award winners.

James O'Malley is a professor of biostatistics in the department of biomedical data science and Dartmouth Institute for Health Policy and Clinical Practice at Dartmouth.

Aasthaa Bansal is an associate professor at the Comparative Health Outcomes, Policy, and Economics (CHOICE) Institute at the University of Washington.

At the 2018 International Conference on Health Policy Statistics (ICHPS), held in Charleston, South Carolina, Anirban Basu was awarded the Mid-Career Excellence Award from the ASA Section on Health Policy Statistics (HPSS). After receiving the award, Anirban was interviewed about his life, including early influences and his opinions related to hot topics in statistics. A summary of this interview by James O'Malley and Aasthaa Bansal follows.

The Mid-Career Excellence Award is for those who are within 15 years of their most significant degree. Having earned his PhD in 2004, Anirban met the eligibility criteria for the 2018 award.

Anirban transitioned from a PhD student in 2004 to full professor in 2014, subsequently receiving a named and endowed full professorship in 2015. He is currently the Stergachis Family Endowed Professor at the University of Washington and director of the Comparative Health Outcomes, Policy, and Economics (CHOICE) Institute.

Anirban's rapid rise was accompanied by a large number of awards, including student awards from the ASA at JSM 2003 and HPSS at ICHPS 2003, a Society for Medical Decision Making (MDM) comparative effectiveness award in 2009, three awards from the International Society for Pharmacoeconomics and Outcomes Research (2007, 2009, 2016), and ASA Fellow in 2016. He has also received lectureships and other honors and published close to 100 publications in journals across multiple disciplines.

Anirban's service work is meritorious, especially for one so young. He chaired the 2010 International Conference on Health Policy Statistics (ICHPS), was HPSS program chair for the Joint Statistical Meetings in 2008, and was a member of the planning or advisory committee for four other ICHPS meetings. In addition, Anirban has chaired or co-chaired conferences of importance to HPSS, including the MDM Annual Meeting in 2011, after co-chairing its Scientific Committee in 2009 and 2010. He also founded the Annual Health Econometrics Workshop (AHEW) in 2009 and has chaired or otherwise overseen each subsequent edition.

Anirban is also prodigious in his receipt of grants and generous in his commitment to grant review and editorial work. He is loved by his students and those he has mentored. And he has a reputation for being a champion for junior investigators, having helped mentor them through the arduous process of obtaining grants. At the time of submitting his nomination for the mid-career excellence award, he had advised or mentored 22 students or postdoctoral fellows.

Timeline and Highlights

Anirban was born in a small town in the state of West Bengal in India. He became interested in statistics during his master's program in pharmaceutical sciences and changed fields to pursue a master's in biostatistics, during which he discussed statistics with P.K. Sen at The University of North Carolina. "Looking back, it was one of the best decisions I made in my career," said Anirban. "I always had a curiosity for economics, partly because my father was an avid follower of financial news." Combining his love of statistics with his passion for population health, Anirban earned a PhD in public policy at The University of Chicago.

Anirban remained at The University of Chicago, becoming a faculty member in 2004, until moving to the University of Washington in Seattle in 2011. In Anirban's first year at Chicago, statistician Paul Rathouz encouraged him to apply for the

HPSS student paper award for his work on estimating marginal and incremental effects on health outcomes. "I was one of the student winners that year and immediately hooked to the section and its members," said Anirban.

A seminal paper he co-authored on the two-stage residual inclusion method seemingly popularized the control function IV approach in the social science and statistical literature, sparking a lot of comment and investigation by statisticians. His work in causal inference was also influenced by a collaboration with James Heckman. Anirban said of this experience, "Working with a Nobel Prize winner is always intimidating. I learned a ton from Jim and his works, really the underpinnings of causal inference, especially in the context of instrumental variables."

Anirban brings to statistics approaches and reasoning developed in other fields. In his 2015 *Journal of Health Economics* paper, Anirban took a well-known theoretical model of behavior known as Roy's model, which captures self-selection by individual agents based on perceived costs and benefits of alternatives, and applied it to study conditions under which patients would agree to enter a randomized controlled trial (RCT) when both the comparators are freely available to them under health insurance.

Asked about data science, Anirban had an interesting perspective. "I think the evolution of the field of data science, beyond statistics, is mostly driven by the type of data we see these days, which spurs innovation in statistical methods," he said. "In economics, causal inference is the king, as many economic problems aim to forecast effects of policies and prices on behavior. So, data sciences, more specifically machine learning methods that focus on prediction and classification, do not immediately fit the requirements within the field. Health is one area where both pure factual prediction problems and problems of counterfactual predictions exist." Anirban continued, "There has been a lot of uptake of data science for the first set of problems. But unlike traditional economics, there is limited scope for large-scale manipulation of data production to apply machine learning for counterfactual predictions. But that has not deterred some researchers from applying these methods erroneously to causal inference problems, without a clear identification rationale. More recently, interesting methods that combine deep learning algorithms with instrumental variable approches are beginning to show promise. But then again, there are clinical researchers who are so tied to RCTs that they refuse to believe that randomization can exist outside of controlled environments."

When asked about his future plans, Anirban said he will "continue to develop new methods and also figure out appropriate application of instrumental variable methods for observational data research." He added, "Another big thrust of my work is to understand heterogeneity in effects and how behavior (patient, provider, policymaker) changes when facing evidence about heterogeneity." ■

Key Publications by/About Anirban Basu

Basu, A., and P. Rathouz. 2005. Estimating marginal and incremental effects on health outcomes using flexible link and variance function models. *Biostatistics* 6, 93–109.

Basu, A., J. Heckman, S. Navarro-Lozano, and S. Urzua. 2007. Use of instrumental variables in the presence of heterogeneity and self-selection: An application to treatments of breast cancer patients. York Health Econometrics and Data Group (HEDG) Working Paper 07/07. (with Editorial) *Health Economics* 16, 1133–1157.

Terza, J., A. Basu, and P. Rathouz. 2008. Two-stage residual inclusion estimation: Addressing endogeneity in health econometric modeling. *Journal of Health Economics* 27, 531–543.

Basu, A. 2015. Welfare implications of learning through solicitation versus diversification in health care. NBER Working paper # 20367. *Journal of Health Economics* 42, 165–173.

O'Malley, A.J., and A. Bansal. 2018. A conversation including 39 questions with Anirban Basu. *Health Services and Outcomes Research Methodology* 18(4), 287–297.

Statistics Workshops for Math and Science Teachers Held in Denver

Katherine Halvorsen, MWM Program Chair, and Rebecca Nichols, ASA Director of Education

STATISTICAL OUTREACH

Members of the ASA/NCTM Joint Committee are encouraging chapters and members to connect with local AP Statistics teachers and middle- and high-school mathematics and science teachers. There is information about K–12 statistics education programs and resources available at *www.amstat.org/education* and guidance on and resources for doing outreach to local schools at *http://bit.ly/2lRxzZS*. Questions should be directed to Rebecca Nichols, ASA director of education, at *rebecca@amstat.org* or (703) 684-1221, Ext. 1877.

Meeting Within a Meeting participants look over patterns in the data. Photo by Eric Sampson/ASA

The American Statistical Association sponsored a two-day Meeting Within a Meeting (MWM) statistics workshop for middle- and high-school mathematics and science teachers July 30–31 at the annual 2019 Joint Statistical Meetings (JSM) in Denver, Colorado.

This year, there were 28 participants, including middle- and high-school teachers, teacher educators, students, and statisticians interested in professional development and teaching statistics at the middle- and high-school levels. Workshop participants came from nine states and the District of Columbia.

MORE ONLINE
Learn more about MWM at *www.amstat.org/ASA/Education/MWM/home.aspx.*

The MWM workshops emphasize the growth of statistical literacy and thinking as teachers explore problems that require them to formulate questions; collect, organize, analyze, and draw conclusions from data; and apply basic concepts of probability. A follow-up program incorporating webinars and email is planned to provide further training and help keep the teachers who attended MWM connected to the ASA.

The MWM 2019 program (*www.amstat.org/ASA/Education/MWM/home.aspx*) was designed to enhance educators' understanding of statistics and provide them with hands-on activities they can use in their own classrooms to strengthen the teaching of statistics in their schools. A secondary goal was to encourage cooperation between mathematics and science teachers in the teaching of statistics and make connections between teachers and local statisticians.

"One of the primary missions of the American Statistical Association is to work for the improvement of statistical education at all levels," said Ron Wasserstein, the ASA's executive director. "We are pleased to reach out to the K–12 mathematics and science community through the MWM workshop and follow-up activities," he added. "MWM will not only enhance understanding and teaching of statistics concepts in the classroom, but also provide participants with a network of statisticians and educators to assist in developing the quantitative literacy of their students."

Each workshop day consisted of three sessions and a closing period used to reflect on the day's work and allow teachers to comment about the program to the organizers. The workshop sessions were preceded by an overview of the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report* (*http://bit.ly/2mkK940*) and other standards relevant to the audience.

Middle-school teachers attended the workshop sessions on both Tuesday and Wednesday and participated in discussions about formulating statistical questions and collecting data, comparative inferences about two populations, investigating patterns of association in bivariate quantitative data, measures of center and variability, investigating sampling variability, and exploring the mathematical practices through a statistical lens.

The sessions in the high-school program on Tuesday included discussions about statistical questions and study design; recognizing data types and the appropriate methods for displaying, summarizing, and comparing them; exploring and using data from grayscale images to develop informal classification models; and using randomization tests to make inferences and justify conclusions.

High-school teachers were given the option to attend the second day of the middle-school workshop on Wednesday, which focused on topics relevant to both middle- and high-school teachers or to attend statistics education sessions at the Joint Statistical Meetings.

All teachers who attended were given a certificate of participation by the ASA. Also, teachers who registered could receive one semester graduate credit hour through Adams State University. The ASA will provide follow-up activities throughout the 2019–2020 school year, including webinars (*http://bit.ly/2mlBGO9*).

Katherine Halvorsen of Smith College planned the MWM program, while ASA Director of Education Rebecca Nichols managed the website, registration and evaluation procedures, and logistics of setting up and advertising the conference. Presenters included ASA K–12 Statistical Ambassador Chris Franklin, ASA/NCTM Joint Committee Past Chair Kaycie Maddox (Northeast Georgia RESA), Anna-Marie Fergusson (University of Auckland, New Zealand), National Council of Supervisors of Mathematics Past President Connie Schrock (Emporia State University), and Halvorsen. Additionally, Wasserstein, Jamie Perrett (ASA/NCTM Joint Committee Chair), and Matt Pocernich from the Colorado-Wyoming ASA Chapter welcomed the attendees.

Planning has begun for MWM 2020, which will be held in conjunction with JSM in Philadelphia, Pennsylvania. MWM program committee members are encouraging chapters to consider sponsoring one or more teachers from their area to attend the workshops. Registration will begin in March 2020 at *www.amstat.org/ASA/Education/MWM/home.aspx*. ■

2019 Beyond AP Statistics (BAPS) Workshop Attracts a Dozen Teachers

Rebecca Nichols, ASA Director of Education, and Roxy Peck, BAPS Program Chair

The American Statistical Association/National Council of Teachers of Mathematics Joint Committee on Curriculum in Statistics and Probability sponsored a Beyond AP Statistics (BAPS) workshop at the annual Joint Statistical Meetings in Denver Wednesday, July 31, 2019. The BAPS workshop (*www.amstat.org/education/baps*) is offered for experienced AP statistics teachers.

This year, 12 teachers from Colorado and other parts of the United States came to Denver for a full-day BAPS workshop designed to strengthen and expand teachers' statistics backgrounds by introducing them to topics just beyond the content of the typical AP Statistics course. The brainchild of former ASA/NCTM Joint Committee Chair Jim Matis, BAPS has been offered at JSM for nearly two decades.

The workshop, organized by Roxy Peck of Cal Poly this year, was divided into four sessions led by the following noted statisticians:

- Jim Cochran, University of Alabama
  Classification and Regression Trees
- Jessica Utts, University of California, Irvine
  Multiple Regression
- Beth Chance, Cal Poly, San Luis Obispo
  Bootstrapping and Simulating Regression Lines
- Allan Rossman, Cal Poly, San Luis Obispo
  Introduction to Bayesian Statistics

BAPS
BEYOND AP STATISTICS

ATTENTION CHAPTERS

Chapters are encouraged to consider sponsoring one or more teachers from their area to attend the MWM and BAPS workshops. Registration will begin in March 2020 at *www.amstat.org/education/baps* and *www.amstat.org/education/mwm*. Questions should be directed to Rebecca Nichols, ASA director of education, at *rebecca@amstat.org* or (703) 684-1221, Ext. 1877.

Participants were given a pass to attend the exhibit hall and sessions at the Joint Statistical Meetings and a certificate of participation from the American Statistical Association certifying professional development hours. An optional 0.5 graduate credit hours was also available through Adams State University. Some BAPS participants opted to also attend the high-school sessions of the Meeting Within a Meeting (MWM) Statistics Workshop for Math and Science Teachers (*www.amstat.org/education/mwm*) the previous day. ■

COPSS Awards

Each year, the Committee of Presidents of Statistical Societies (COPSS) recognizes outstanding members of our profession during the Joint Statistical Meetings. Nominations are an important part of the process, and everyone can contribute. We recognize excellence in our mentors, colleagues, and friends, and it is important to single out those who have made exceptional contributions to the profession.

The following three COPSS awards will be presented during JSM 2020, to be held in Philadelphia, August 1–6:

The **Presidents' Award** is presented annually to a young member of one of the participating COPSS societies in recognition of outstanding contributions to the statistics profession. It is typically granted to an individual who either i) has not yet reached his or her 41st birthday during the calendar year of the award or ii) will be under age 46 throughout the award calendar year and will have received a terminal statistically related degree no more than 12 years prior to that year. Nominations must be sent by December 15, 2019—preferably by email in PDF format—to Susan Halabi, chair of the COPSS Presidents' Award Committee, at *susan.halabi@duke.edu.*

The **Fisher Award and Lectureship,** awarded annually, was established in 1963 by COPSS to honor the outstanding contributions of the late Sir Ronald Aylmer Fisher and those of a current statistician for aspects of statistics and probability that closely relate to the scientific collection and interpretation of data. The award exists to recognize the importance of statistical methods for scientific investigations. Nominations must be sent by December 15, 2019—preferably by email in PDF format—to Sharon-Lise Normand, chair of the COPSS Fisher Lecture and Award Committee at *sharon@hcp.med.harvard.edu.*

The **Elizabeth L. Scott Award and Lectureship** is presented biennially (even-numbered years) to an individual—male or female—who has helped foster opportunities in statistics for women. The 2020 award winner will deliver the first E. L. Scott Lecture at JSM in Philadelphia. Nominations must be sent by December 15, 2019—preferably by email in PDF format—to Elizaveta Levina, chair of the COPSS Scott Lecture and Award Committee, at *elevina@umich.edu.*

Visit *https://community.amstat.org/copss/home* for details about these awards. ■

Jeanne E. Griffith Mentoring Award

Nominations for the 2020 Jeanne E. Griffith Mentoring Award can be submitted beginning January 2, 2020.

The award honors Jeanne E. Griffith, who died in 2001 after working for more than 25 years in the federal statistical system. It acknowledges supervisors, technical directors, team coordinators, or other members of government statistical staff who have made unique efforts to mentor younger staff. The award includes a plaque and $1,000 honorarium.

Nomination packages can be emailed to Rick Peterson at *rick@amstat.org* or mailed to The Jeanne E. Griffith Mentoring Award Committee, c/o The American Statistical Association, 732 N. Washington St., Alexandria, VA 22314-1943.

If you have questions about the award, contact Peterson or Bill Mockovak, chair of the award committee, at *Mockovak.William@bls.gov.* ■

Waksberg Award

The journal *Survey Methodology* has established an annual invited paper series in honor of the late Joe Waksberg to recognize his outstanding contributions to survey methodology. Each year, a prominent survey statistician is chosen to write a paper that reviews the development and current state of an important topic in the field of survey methodology. The paper reflects the mixture of theory and practice that characterized Joe Waksberg's work.

The recipient of the Waksberg Award will receive an honorarium and give the 2021 Waksberg Invited Address at the Statistics Canada Symposium, expected to be held in the autumn of 2021. The paper will be published in a future issue of *Survey Methodology* (targeted for December 2021).

The author of the 2021 Waksberg paper will be selected by a four-person committee appointed by *Survey Methodology* and the ASA.

Nominations of individuals to be considered as authors or suggestions for topics should be sent before February 28, 2020, to the committee chair, Bob Fay, at *BobFay@westat.com.* ■

Iowa State Teams Finish in Top 10 at International Data Mining Competition

Iowa State University graduate students brought home the top prize in an international data mining competition.

The team consisted of Qihao Zhang (statistics), Qinglong Tian (statistics), Shaodong Wang (industrial and manufacturing systems engineering), Zerui Zhang (industrial and manufacturing systems engineering), Xingche Guo (statistics), Yifan Zhu (statistics), Haoyan Hu (statistics), Gang Han (statistics), Haihan Yu (statistics), Lijin Zhang (statistics), Yueying Wang (statistics), and Wenting Zhao (statistics).

A second team of industrial and manufacturing systems engineering and statistics students took eighth place. That team consisted of Oscar Aguilar (statistics), Hanisha Vemireddy (industrial and manufacturing systems engineering), Samira Karimzadeh (industrial and manufacturing systems engineering), Reyhaneh Bijari (industrial and manufacturing systems engineering), Kanak Choudhury (statistics), and Souradeep Chattopadhyay (statistics).

The winning teams were invited to Berlin, Germany, for a celebration ceremony on July 3, and the first-place team took home 2,000 euros in prize money.

Read more about these students at the Iowa State University website at *www.news.iastate.edu/news/2019/07/08/data-mining*. For more information about the Data Mining Cup Competition, visit *www.data-mining-cup.com/reviews/dmc-2019*.

The Ellis R. Ott Governing Board recently announced scholarships for the 2019–2020 academic year have been awarded to Patricia Aubel and Kayla Reiman.

Patricia Aubel will be a

Aubel

statistics master's student at the University of California, Davis, starting in the fall of 2019. She earned a bachelor's in applied math from San Jose State University and a master's in global health from the University of California, San Francisco. Aubel uses statistical and epidemiological approaches to understand the effect of policy on public health. Previously, she worked at a Stanford social psychology lab and was a fellow in the cancer and genomics lab at Cold Spring Harbor Laboratory. She is also passionate about teaching statistics and has worked as a community college math instructor. Aubel decided to pursue a career in applying quantitative methods to population health after studying violence prevention as an epidemiology intern at the Harvard School of Public Health.

Kayla Reiman has been

Reiman

working in research and quality control since graduating from Wesleyan University in 2014, first at a small nonprofit and then in the research sector. In 2016, she became a statistical programmer at MDRC, an organization that evaluates programs serving low-income people. There, she researched financial aid interventions, created data-tracking and benchmarking tools for college staff, and co-authored a methodological paper on the generalizability of regression discontinuity designs. She is now studying applications of data analytics to public policy at Carnegie Mellon University.

Both Aubel and Reiman will receive $7,500 to support their academic pursuits.

The Ellis R. Ott Scholarship is awarded each year to promising students of applied statistics and quality management. The scholarship program is named after Ellis Ott, a highly regarded statistical pioneer who founded the much-emulated applied and mathematical statistics program at Rutgers University and whose colleagues and students went on to leadership positions in the discipline. Since 1998, this program—under the auspices of the ASQ Statistics Division—has awarded 58 scholarships, amounting to $322,500, to foster Ott's statistical legacy. For information about the scholarship, visit the statistics division of the American Society for Quality at *http://asq.org/statistics/about/ott*. ■

James Robins, Mitchell L. and Robin LaFoley Dong Professor of Epidemiology at Harvard, has received the inaugural Distinguished Lectureship Award from the Center for Causal Inference. Robins accepted the award at the center's annual Causal Inference Summer Institute, which was hosted by the Rutgers School of Public Health in New Brunswick, New Jersey.

Robins' research has focused on the development of analytic methods appropriate

for drawing causal inferences from complex observational and randomized studies with time-varying exposures or treatments. The new methods are to a large extent based on the estimation of the parameters of a new class of causal models—the structural nested models—using a new class of estimators—the G estimators. The usual approach to the estimation of the effect of a time-varying treatment or exposure on time to disease is to model the hazard incidence of failure at time *t* as a function of past treatment history using a time-dependent Cox proportional hazards model. ■

Meyer

Bruce Meyer, McCormick Foundation Professor at The University of Chicago Harris School of Public Policy, has been honored with the 2019 Links Lecture Award for adding important links in the progress of official statistics through research and advisory activities.

Meyer has worked extensively to explore ways to improve official statistics by linking data from multiple survey and administrative sources. He also served on the Commission for Evidence-Based Policymaking.

Meyer's lecture is titled, "Linking Data to Improve Income Statistics."

Mary Bohman, deputy director at the Bureau of Economic Analysis, will serve in the program as the "connector," relating the points in Meyer's lecture to the work of agencies engaged in the production of official statistics.

The lecture will be held October 18 at the National Academy of Sciences building, 2101 Constitution Ave., NW. The timing will align with events being held at the academy for Data Linkage Day.

The Links Lecture is sponsored by the American Statistical Association to bring visibility to issues surrounding the advancement of official statistics, such as the following:

- The statistical use of administrative records and alternative data sources
- Record linkage
- Statistical methods for creating blended estimates
- Privacy, confidentiality, researcher access, and reproducibility of results

The lecture series also celebrates Constance Citro, Robert Groves, and Fritz Scheuren, who have been critical links in envisioning the future of official statistics. For more information about the Links Lecture Award, see *www.amstat.org/ASA/Your-Career/Awards Links-Lecture-Award.asp*x. ■

House Minority Leader Nancy Pelosi appointed **Philip Stark,** former chair of the University of California, Berkeley, Statistics Department, to serve on the United States Election Assistance Commission (EAC) Board of Advisors.

Established by the Help America Vote Act of 2002 (HAVA), the EAC Board of Advisors is comprised of 37 individuals who assist the EAC in carrying out its

Stark

federally mandated duties, which include the following:

- Developing guidance to meet HAVA requirements
- Adopting voluntary voting system guidelines
- Serving as a national clearinghouse of information about election administration
- Accrediting testing laboratories and certifying voting systems
- Auditing the use of HAVA funds

Under HAVA, the house minority leader can select one professional from the field of science and technology to serve on the EAC Board of Advisors.

A professor of statistics and associate dean of mathematical and physical sciences at UC Berkeley, Stark is considered the originator of "risk-limiting" audits and has worked with California and Colorado secretaries of state, helping to conduct risk-limiting audits in nearly 20 counties. He testified about election integrity before the California legislature and at trial in a contested election. He also sits on the development team for the Travis County, Texas, STAR-Vote system, which combines auditability with end-to-end cryptographic verifiability.

Read more about the EAC and Stark's appointment at *www.amstat.org/asa/News/Former-UC-Berkeley-Stats-Chair-Appointed-to-EAC-Board.aspx*. ■

Sharon Boivin Receives 2019 Jeanne E. Griffith Mentoring Award

Bill Mockovak, 2019 Jeanne E. Griffith Award Selection Committee Chair

Boivin

The Jeanne E. Griffith Award Selection Committee hosted an awards ceremony and reception July 10 to honor Sharon Boivin with the 2019 Jeanne E. Griffith Award, which recognizes individuals working in federal, state, and local government agencies for their efforts to mentor junior statistical staff.

Family, friends, and colleagues joined friends of Jeanne Griffith, the award committee, the Interagency Council on Statistical Policy (ICSP), and Boivin at the ceremony, marking the 17th annual presentation of the award and the 11th year the Government Statistics Section (GSS) has managed the award process.

Boivin is a mathematical statistician at the National Center for Education Statistics (NCES), but she has had an impact across the federal government and statistical system by working as a senior member of the Commission on Evidence-Based Policymaking and on assignment to help create a federal data strategy. As her nominators Tiffany Julian and Shelly Martinez point out, they were moved by the stories of how Boivin helped individuals overcome doubts and fears while generously sharing her time and expertise and serving as a sounding board in professional and personal situations.

Acknowledged within NCES for her contributions to mentoring, Sharon applied this same ethic to assignments outside NCES. As one nominator noted, Sharon brought deep expertise to the team, but also contributed work ethic, positivity, and optimism that was infectious.

Several of the people Boivin mentored mentioned how she was willing to share her skills, pushed them to learn new skills and take on new opportunities, and encouraged them to expand their professional networks. Others commented that she actively sought their feedback, encouraged them to interact and meet with other staff, and urged them to give presentations at meetings or professional conferences. Boivin also served as a sounding board and confidante who was willing to help her staff think through career goals and options while providing thoughtful and honest feedback.

A nominator also pointed out how Boivin has a heart for guiding and creating dedicated civil servants. This passion was on display when Boivin successfully recruited almost 40 part-time team members from across the federal government to create a federal data strategy. In the process, she emphasized professional development, honest communication between team leadership and fellows, and effective performance. She was also always willing to share her time and knowledge, even within such a large group. ■

Award Cosponsors

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2019 Award Committee Members

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Anna Nevius, Retired

Joy Sharp, US Energy Information Administration

Cynthia Ogden, US Centers for Disease Control and Prevention

Diane Willimack, US Census Bureau

chapternews

Sarah Egan Warren gives a presentation about social media to North Carolina Chapter members.

North Carolina

The North Carolina Chapter held a mini-workshop, titled "LinkedIn and Your Professional Presence on Social Media," at SAMSI on May 13. Sarah Egan Warren, head of technical communication, and April Wilson, head of career services, at North Carolina State University's Institute for Advanced Analytics, gave a presentation about having a professional presence on social media. Students and young professionals learned about using their professional presence to create options and define their career paths.

Specifically, Warren and Wilson discussed how recruiters consider your online presence and what they look for in your profile. They also provided resources for choosing a profile picture and creating an effective LinkedIn summary. Attendees were also given advice about using LinkedIn to help with networking. ■

Detroit, Ann Arbor Chapters Celebrate Michigan Statistics Poster Awards

Karry Roberts, ASA Detroit Chapter Secretary

Macomb Academy of Arts & Sciences, Armada, Michigan. From left: Sabrina Grove, Malissa Hiller, Rob Kushler, Tessa Goldun, Violet Fiddes, Annaliese Germundson, David Corliss, Anastasia Misson, Karry Roberts, and Kaitlyn Goretski

Uriah Lawton Elementary, Ann Arbor, Michigan. From left: Rob Kushler, June Cooke, Mr. and Mrs. Tewari, Paavani Tewari, Karry Roberts, and Anamaria Kazanis

The Detroit and Ann Arbor chapters recognized students and their teachers at two schools to celebrate their Michigan Statistics Poster Competition awards.

Rob Kushler, David Corliss, and Karry Roberts of the Detroit Chapter held a recognition event in Violet Fiddes' classroom at Macomb Academy of Arts & Sciences in Armada, Michigan. Fiddes, a mathematics and computer science teacher, encourages her students to enter the competition with projects that are applications of classroom learning. This year, her students won all three places in the Grades 7–9 category:

- First Place: **Annaliese Germundson** and **Tessa Goldun,** "Which Gender Feels Safer When Walking Alone?"
- Second Place: **Malissa Hiller** and **Sabrina Grove, "**Do High-School Students Spend Their Free Time Wisely?"
- Third Place: **Anastasia Misson** and **Kaitlyn Goretski,** "Favorite Dogs"

Kushler and Roberts, along with ASA Council of Chapters Representative to the Board of Directors Anamaria Kazanis, also held an awards ceremony in June (Jinx) Cooke's classroom at Uriah Lawton Elementary in Ann Arbor, Michigan.

Fourth-grader Paavani Tewari won awards for the second year in a row. She won first place in both the Michigan Statistical Poster Competition and the ASA Data Visualization Poster Competition in the Grades 4–6 category with her poster, "How Does My Body Temperature Vary?"

Paavani presented her extracurricular project, and Cooke emphasized how rewarding external activities can be. ■

NJ Chapter Holds 40th Spring Symposium

From left: Dirk Moore (Symposium Committee Member), Steve Ascher (NJ Chapter Secretary), CV Damaraju (NJ Chapter Treasurer), Jing Gong (NJ Chapter President), Gary Rosner, Peter Mesenbrink, Hui Quan, James Travis, Satrajit Roychoudhury, and Shiling Ruan (NJ Chapter Vice President)

The New Jersey Chapter held its 40th Spring Symposium at Rutgers RWJ Medical School June 28. The theme of the symposium was Clinical Trials for Rare Diseases and Pediatric Populations: Challenges in Design and Analysis.

Approximately 70 people attended the following presentations:

- **Gary Rosner** of The Johns Hopkins University, "Meta-Analysis of Rare Adverse Events in Randomized Clinical Trials: Bayesian and Frequentist Methods"
- **Hui Quan** of Sanofi, "A Case Study of Phase II/III Seamless Adaptive Design in a Rare Disease Area"
- **Cong Chen** of Merck, "Statistical Considerations on Early-to-Late Transition of Oncology Projects
- **Peter Messenbrink** of Novartis, "Innovation in Pediatric Trial Design in Rare Autoimmune Diseases
- **Satrajit Roychoudhury** of Pfizer Inc., "Incorporating Adult Clinical Data into Pediatric Clinical Trials: A Robust Bayesian Approach
- **James Travis** of FDA, "Pediatric Drug Development: A Regulatory Perspective

The following three posters were also on display:

- **Ken Goldberg** of Johnson & Johnson, "Robust Statistical Methods for Defining Cut Points Based on Tolerance Intervals"
- **Dirk Moore** of Rutgers, "Using Competing Risks Survival Data from the SEER-Medicare Database to Power a Prostate Cancer Randomized Clinical Trial"
- **Steve Ascher,** "ASA NJ Chapter Spring Symposium—40th Anniversary: A Brief History"

During lunch, NJ Chapter Secretary Steve Ascher gave a brief presentation on the history of the Spring Symposium, where a celebratory cake was cut to commemorate the 40th anniversary of the event. ■

sectionnews

Biometrics

The ASA Biometrics Section invites applications for funding to support projects developing innovative outreach projects focused on enhancing awareness of biostatistics among quantitatively talented US students. The section is particularly interested in projects that will encourage students to pursue advanced training in biostatistics.

The section anticipates funding one project this year, with total funding of up to $3,000. The project timeline would be from 1.5–2 years. All investigators are encouraged to apply. Award recipients must be an ASA member and Biometrics Section member before project initiation.

A three-page application is due by November 15 and should be in the following format:

Title

Objectives and Specific Aims

Background, Significance, and/or Rationale

Design and Methods

Deliverables/Products

Budget

The following types of expenditures are allowed: supplies, domestic travel (when necessary to carry out the project), professional expertise (e.g., instructional designer or webmaster), and cost of computer time. The following types of expenditures are not allowed: secretarial/administrative personnel, tuition, foreign travel, and honoraria and travel expenses for visiting lecturers to the investigator's home institution.

A project period with a start date no earlier than January 1,

2020, and an end date no later than December 31, 2021, also should be specified.

Applications should be submitted electronically to Strategic Initiatives Subcommittee Chair Tanya Garcia at *tpgarcia@stat.tamu.edu*. All investigators will be expected to submit a brief report at the conclusion of the project to Garcia. Questions should be addressed either to Garcia or to the subcommittee co-chair, Milan Bimali, at *MBimali@uams.edu*. ■

Physical and Engineering Sciences

The newly elected SPES officers are as follows:

- Jennifer Kensler, Chair-elect
- Claire McKay Bowen, JSM Program Chair-elect
- Michael Crotty, Secretary/Treasurer ■

Survey Research Methods

The Survey Research Methods Section (SRMS) offers student travel awards for students in any terminal degree program (bachelor's, master's, or doctoral) in survey methodology or survey research disciplines.

Support is offered for student attendance at the Joint Statistical Meetings (JSM), to be held in Philadelphia, Pennsylvania, from August 1–6, 2020. Preference is given to students presenting a paper or poster at the conference. In addition to a short essay and college transcripts, applications must include a letter of recommendation by a current SRMS member.

Typically, awards of up to $825 are given, which includes $800 for JSM expenses and $25 for student membership in the ASA (student membership in SRMS is free). Award recipients are expected to attend JSM sessions and the SRMS business meeting/mixer to be recognized by the section.

Application forms are available at *www.asasrms.org/travelapp_2020.pdf*. Previous SRMS student travel award winners and previous SRMS student paper competition winners are not eligible for this award.

The deadline for applications is December 16. Questions should be sent to Darcy Steeg Morris at *darcy.steeg.morris@census.gov*.

JSM 2020 Topic-Contributed Session Proposals

JSM 2019 may just be behind us, but it is time to organize your potential JSM 2020 topic-contributed session; proposals can be submitted online between November 12 and December 10.

Topic-contributed sessions include papers (five speakers with 20 minutes each, with at least three presenters and no more than two discussants), panels (3–6 panelists providing commentary about a topic), and posters (10–15 participants with posters addressing a common topic).

A topic-contributed session proposal includes a session title, general description of the session, list of participants, and tentative talk titles.

If you are interested in organizing a topic-contributed session, select a session topic and solicit potential speakers. Once you have a sufficient number of committed speakers, you can submit your proposal at *ww2.amstat.org/meetings/jsm/2020/submissions.cfm*. ■

Statistics and Data Science Education

It was another stellar JSM under Section Program Chair Stacey Hancock and Roundtable/Birds-of-a-Feather Chair Amelia McNamara. Section highlights included sponsoring a workshop for graduate students preparing to teach, four invited panels/sessions, four topic-contributed panels/sessions, two contributed paper sessions, one contributed poster session, one speed poster session, two roundtables, and 10 birds-of-a-feather discussions.

Slides from JSM 2019 talks and the detailed handout and minutes from the business meeting will be posted to the section's website at *https://community.amstat.org/statisticaleducationsection/home*.

This was the second year of a joint education table at JSM with the Section on Teaching Statistics in the Health Sciences, History of Statistics Special Interest Group, and Business Analytics/Statistics Education Special Interest Group. Carol Blumberg and Rebecca Nichols organized the four-table booth, a one-stop shop for all things education and history.

Congratulations to the following education award honorees:

2018 Ron Wasserstein Award for Best Contributed Paper: **Jennifer Green** of Montana State University, "STEM Storytellers, Improving Graduate Students' Oral Communication Skills"

2018 Ron Wasserstein Award for Best Contributed Paper Honorable Mention: **Sherry Hix** of the University of North Georgia, "Extending the Applications of Simulation-Based Approaches in the Teaching of Elementary Statistics"

2019 Section on Statistics and Data Science Education Speed Session Award:

Honorable Mention: **Ginger Holmes Rowell** of Middle Tennessee State University, "Digital Metaphors: A Tool to Provide Insights into Introductory Statistics Students' Motivation and Success"

Honorable Mention: **Allison Theobold** of Montana State University, "Computational Workshops to Facilitate Implementation of Statistics in Scientific Research"

Winner: **Gwendolyn Marie Eadie** of the University of Washington, "Active-Learning for Bayesian Inference: An Introductory Exercise Using M&M's Candy"

2019 Mu Sigma Rho National Statistics Honor Society William D. Warde Statistics Education Award: **Deb Nolan,** University of

California at Berkeley

2019 Section Service Award: **Stacey Hancock**, Montana University

ASA Fellows: **Ann Cannon, Keith Crank, Kate Crespi, Davy Paindaveine,** and **Mike Shaughnessy**

Section Fellows: **Kathy Fubo** and **Amy Hogan**

Section Fellows

The section recently created the Fellowship Program for High-School and Two-Year College Teachers. It is designed for individuals who want to make an impact beyond their classroom setting. As part of the program, the selection committee selects at most one high-school teacher and one two-year college teacher. Each one-year fellowship begins in August and aims to provide opportunities for the fellows to expand their influence and involvement in statistics education innovation.

Mentoring Program

The mentoring program, founded in 2016, connects early-career statistics educators with experienced mentors to provide career advice help participants achieve their professional goals. A fourth set of 20 pairings for 2019–2020 was announced prior to JSM. We still have a few unmatched mentors. Applications for 2020–2021 will open in the spring.

Website

Brigitte Baldi has been working to improve our section website (*http://community.amstat.org/statisticaleducationsection/home*), which has a variety of useful resources and links, including a newly added initiatives page. Suggestions for additions or improvements can be sent to her at *baldib@uci.edu*.

Graduate Student Workshop

The NSF and IMS New Researchers Group sponsored a one-day workshop for 35 graduate students with an interest in teaching statistics and data science. Presenters included Beth Chance of Cal Poly, Allan Rossman of Cal Poly, Nick Horton of Amherst, Ulrike Genschel of Iowa State, and Mine Çetinkaya-Rundel of the University of Edinburgh/Duke. We are planning continued communication and support for this group with Zoom calls throughout the academic year.

New Officers

Our new officers are Jo Hardin of Pomona, chair-elect 2020; Maria Tackett of Duke, communications officer 2020–2022; Brianna Heggeseth of Macalester, Council of Sections representative 2020–2022; Lisa Kay of Eastern Kentucky University, executive committee at-large 2020–2022; and Ellen Breazel of Clemson, executive committee at-large 2020–2022.

Officers whose terms are ending December 31 are Beth Chance, past chair; Stacey Hancock, 2019 program chair; Kay Endriss, communications officer; Garrett Grolemund, executive committee; Rebecca Nugent, executive committee; and Erin Blankenship, Council of Sections representative.

Policy and Guidelines

All section members are invited to review the ASA Activities Conduct Policy at *www.amstat.org/ASA/Meetings/Meeting-Conduct-Policy.aspx* and Ethical Guidelines for Statistical Practice at *www.amstat.org/ASA/Your-Career/Ethical-Guidelines-for-Statistical-Practice.aspx*. We will be linking to these from the section website, as well.

Continuing Education

The section is starting a new continuing education series, Infusing Data Science Education and Applications into Statistics Learning Communities (IDEAS). IDEAS will feature five sessions to run between October and April or July 2020 on topics such as mastering the Tidyverse, Bayesian statistics, and K–12 statistics education. More information is forthcoming in the ASA Community.

The Data Science Education Working Group—comprised of faculty and industry professionals from statistics, computer science, and data science (Nick Horton, Rob Gould, Stacy Hancock, Ben Baumer, Lance Waller, Cassandra Pattanayak, Bill Notz, Erin Blankenship, Dennis Sun, John DeNero, Kathryn Kozak, Min Chi, Shirley Yap, Beth Chance, and Mine Çetinkaya-Rundel) is continuing its efforts and will be disseminating milestones and products via the ASA Community.

Save the date for the Electronic Conference on Teaching of Statistics (eCOTS), which will take place May 18–22, 2020 (*www.causeweb.org/cause/ecots/ecots20*).

Call for Papers

The *Journal of Statistics Education* has announced a call for papers for a special fall 2020 issue looking backward and forward 10 years after the publication of Nolan and Temple Lang's *The American Statistician* paper, "Computing in the Statistics Curriculum." Details can be found at *https://nhorton.people.amherst.edu/JSEFlier2.pdf*.

Become a Section Member

Like what you see, but you aren't a section member? You can easily add a section to your membership outside of your regular ASA membership renewal cycle. (You would pay full annual section dues for the abbreviated time until your next renewal.) Go to the ASA website and log in using your ASA user name and password. In the Members Only area under your name, there is a button labeled "Add items to your membership." This is where section and chapter memberships can be added. The Section on Statistics and Data Science Education welcomes you! ■

Professional Opportunity listings may not exceed 65 words, plus equal opportunity information. The deadline for their receipt is the 20th of the month two months prior to when the ad is to be published (e.g., May 20 for the July issue). Ads will be published in the next available issue following receipt.

Listings are shown alphabetically by state, followed by international listings. Vacancy listings may include the institutional name and address or be identified by number, as desired.

Professional Opportunities vacancies also will be published on the ASA's website (*www.amstat.org*). Vacancy listings will appear on the website for the entire calendar month. Ads may not be placed for publication in the magazine only; all ads will be published both electronically and in print.

These listings and additional information about the 65-word ads can be found at *ww2.amstat.org/ads*.

Employers are expected to acknowledge all responses resulting from publication of their ads. Personnel advertising is accepted with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual orientation.

Also, look for job ads on the ASA website at *https://jobs.amstat.org/jobseekers*.

Florida

■ The Health Informatics Institute at the University of South Florida invites applications for an open-rank research faculty position in biostatistics. The Institute is NIH-funded as a statistics and data coordinating center for several large clinical research networks (*www.hii.usf.edu*). Preferred areas of interest include longitudinal data analysis, clinical trials, and big data analytics. University benefits package, EOE. Apply to position 22377 or 22378 at *Careers@USF.edu*.

Iowa

■ Cornell College is searching for a tenure-track assistant professor of statistics in the Department of Mathematics and Statistics, starting 2020–2021. This individual will contribute to the expansion of statistics and data science courses, as well as creating majors in statistics and data science. Normal course load is six courses per year. Interest in engaging students in research, competitions, and/or internships, a plus. Apply online: *https://www.mathjobs.org/jobs/jobs/14137*. EOE.

Louisiana

■ Louisiana State University located in Baton Rouge, Louisiana, seeks candidates for Department Head of the Department of Experimental Statistics (EXST). The successful candidate will be a leader with a shared vision to guide, support, and inspire a multidisciplinary faculty and staff in their tripartite mission of scholarly teaching, research, and outreach. For more information visit the LSU Career site: *https://lsu.wd1.myworkdayjobs.com/LSU/job/LSU---Baton-Rouge/Department-Head-Chair---Tenured_R00036318*. EOE.

Massachusetts

■ The Department of Mathematical Sciences at Bentley University, located in Waltham, Massachusetts, invites applications for tenure track positions beginning fall 2020. We seek candidates to add to our strengths in applied statistics, applied mathematics, data science and machine learning. The rank and salary will be commensurate with experience. To learn more and to apply, go to *https://bentley.wd1.myworkdayjobs.com/faculty/job/Bentley-Campus/Tenure-Track-Open-Rank--Mathematical-Sciences_R0000318*. Bentley University is an Equal Opportunity Employer, building strength through diversity. The University is committed to building a community of talented students, faculty and staff who reflect the diversity of global business. We strongly encourage applications from persons from underrepresented groups, individuals with disabilities, covered veterans and those with diverse experiences and backgrounds. We strive to create a campus community that welcomes the exchange of ideas, and fosters a culture that values differences and views them as a strength in our community.

Michigan

■ The University of Michigan Department of Biostatistics is seeking applicants for two open rank and one tenure-track faculty positions for Fall 2020. Candidates must have a strong research background with a doctoral degree in biostatistics, statistics, mathematics, the computational sciences or a related field. For further details, visit: *https://sph.umich.edu/biostat/faculty-research/job_postings.html*. Applications from women and minorities are encouraged. EOE/AA.

New York

■ Syracuse University invites applications for Professor of Business Analytics at Whitman School of Management starting January 2020. This recruitment is part of an ambitious Invest Syracuse Cluster Hire Initiative in the broad area of big data and data analytics. Qualified candidates must have earned PhD in data sciences and have a distinguished record of publications and extramural funding. Apply online at *www.sujobopps.com/postings/78613*. EOE.

North Carolina

■ The Department of Statistics at NC State University is hiring tenure-track faculty (all ranks). Start date is August 2020. Applicants in any area of statistics or biostatistics will be considered. The ability/desire to supervise graduate student research and to pursue excellence in teaching are essential. To apply: *https://jobs.ncsu.edu/postings/120549*.

Applicants must have a PhD in statistics, biostatistics or related field by the time of employment. NC State University is an equal opportunity and affirmative action employer. Women and members of other underrepresented groups are encouraged to apply. In addition, NC State University welcomes all persons without regard to sexual orientation or genetic information.

Texas

■ The Department of Statistics and Data Sciences at The University of Texas at Austin invites applications for an open rank tenured/tenure track faculty appointment to begin in Fall 2020. Qualifications include a PhD in statistics or related field with research interests in any area of statistical applications, theory, or methods. Details and application are available: *http://apply.interfolio.com/66455*. EOE.

Institute of Statistical Science, Academia Sinica
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Institute of Statistical Science, Academia Sinica is pleased to invite applications for our tenure-track faculty positions. Academia Sinica, the most preeminent academic research institution in Taiwan, offers a secured research environment facilitated with rich collaboration opportunities as well as the freedom of conducting independent research. With a strong tradition of theoretical and interdisciplinary research, the Institute of Statistical Science is aiming for global excellence in mathematical statistics and various statistical applications.

Applications are invited for tenure-track appointments as Full/Associate/Assistant Research Fellows (equivalent to Full/Associate/Assistant Professors in Universities) in the Institute of Statistical Science, Academia Sinica, to commence on August 1, 2020 or as soon as possible thereafter. Applicants should possess a Ph.D. degree in Statistics, Biostatistics, Computer Science, Data Science or related areas, and should submit: (1) a cover letter, (2) an up-to-date curriculum vita, (3) a detailed publication list, (4) a research proposal, (5) three letters of recommendation, (6) representative publications and/or technical reports and (7) advisers' names of master and PhD degrees. Additional supporting materials such as transcripts for new Ph.D. degree recipients may also be included. Electronic submissions are encouraged. Applications should be submitted to

Dr. Yen-Tsung Huang, Chair of the Search Committee
Institute of Statistical Science, Academia Sinica
128 Sec. 2 Academia Road, Taipei 11529, Taiwan, R.O.C.
Fax: +886-2-27886833
E-mail: *recruit@stat.sinica.edu.tw*

Application materials should be received by December 27, 2019 for consideration, but early submissions are encouraged.

NC STATE UNIVERSITY

Department of Statistics
Tenure-Track Faculty Positions

The Department of Statistics at North Carolina State University seeks to hire multiple tenure-track faculty. All ranks will be considered. The start date is August 2020.

Applicants with interests and expertise in theoretical or methodological research in any area of statistics or biostatistics will be considered. Candidates with interests in data science, machine learning, and modern methods of data analysis more generally are encouraged to apply. The ability and desire to supervise graduate student research and to pursue excellence in teaching are essential.

To apply, please visit: https://jobs.ncsu.edu/postings/120549

The Department provides a dynamic environment for teaching, research and collaborations across disciplines. Inclusiveness and diversity are academic imperatives and are university goals: You will be expected to foster an environment that is supportive and welcoming of all groups. We are interested in candidates who have experience working with students from diverse backgrounds and have a demonstrated commitment to improving access to higher education for students from underrepresented groups.

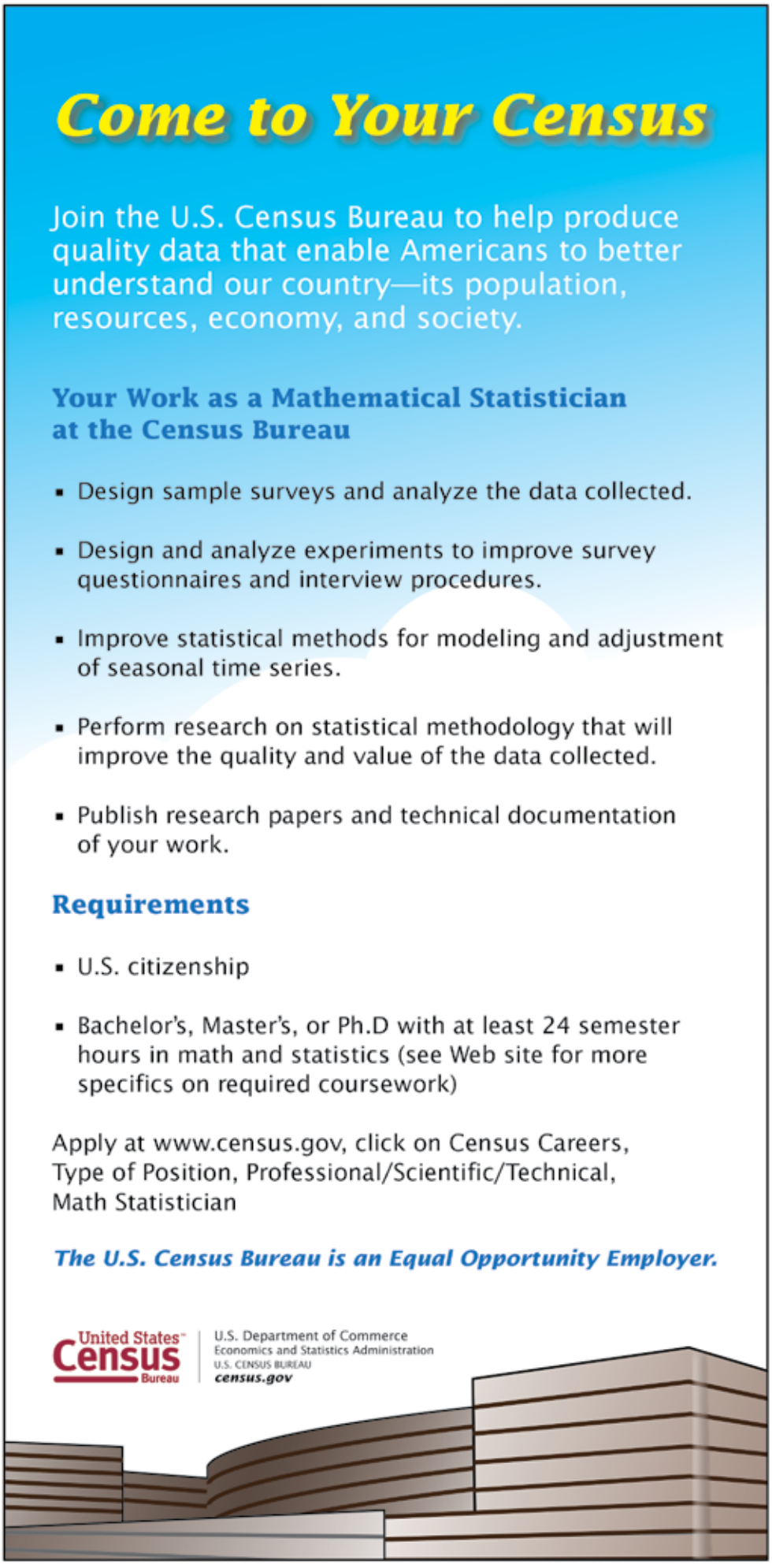
The Department's location in the Research Triangle provides rich opportunities for interactions with industry; other universities, including Duke University and the University of North Carolina at Chapel Hill; and government agencies. Faculty enjoy collaborations with medical researchers at Duke, environmental scientists at the EPA research facility, pharmaceutical researchers at Glaxo-SmithKline, and software developers at SAS Institute, among many others. The Department is also a founding cooperator of the NSF-funded Statistical and Applied Mathematical Sciences Institute (SAMSI), located nearby in Research Triangle Park.

All applicants must have a Ph.D. in Statistics or Biostatistics or a related field by the time of employment. Review of applications will begin soon, and continue until the positions are filled. Questions about the search may be directed to the Search Committee Chair (stat_search@stat.ncsu.edu).

NC State University is an equal opportunity and affirmative action employer. Women and members of other underrepresented groups are encouraged to apply. In addition, NC State University welcomes all persons without regard to sexual orientation or genetic information.

Utah

■ The Department of Mathematics at the University of Utah invites applications for full-time tenure-track or tenured appointments at the level of assistant, associate, or professor in all areas of statistics. These positions are part of a University-wide cluster hiring effort in statistics, with particular emphasis in mathematics, computer science, and bioengineering. Successful candidates will have strong interdisciplinary interests. More information at *www.math.utah.edu/positions*. The University of Utah is an Equal Opportunity/Affirmative Action employer and educator. Minorities, women, veterans, and those with disabilities are strongly encouraged to apply. Veterans' preference is extended to qualified veterans. Reasonable disability accommodations will be provided with adequate notice. For additional information about the University's commitment to equal opportunity and access see: *www.utah.edu/nondiscrimination*. ■



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Francois Dion @f_dion
Usually it is something related to art: music (recording a jazz band, composing music, or simply listening to #vinyl records and r2r tape), photography (astro, micro, macro, architecture etc) or drawing.

Putting a bit of color in your weekend... "Polvo"

April Milliken MacKinnon Piano accompanist, my hobby-job.

Jeffrey Dawson Tennis and running when I am home; snorkeling and scuba diving when I am on vacation.

Jorre Vannieuwenhuyze Raising children! 😊

Aneddy Gunn Running😍

Marjorie Bond Paper crafting or camping.

Chris Hulme-Lowe Video games, D&D, and going to concerts.

Larry Lesser songwriting

Carolina Liskey Reading Sci-Fi because that's where Science begins.

Michaela Cottee Playing the (pipe) organ.

Tapio Nummi Playing sax.

Richard Forshee Taking gigapixel panoramas, *http://gigapan.com/gigapans/45240*

Bruce Blackman Flipping properties, riding motorcycle

Nalyn P. Cañones Watching Chinese dramas and Korean dramas...

Next month, we'll ask: Is there a book of commandments for a statistician? If so, what is it?

Tag @AmstatNews with your answer.

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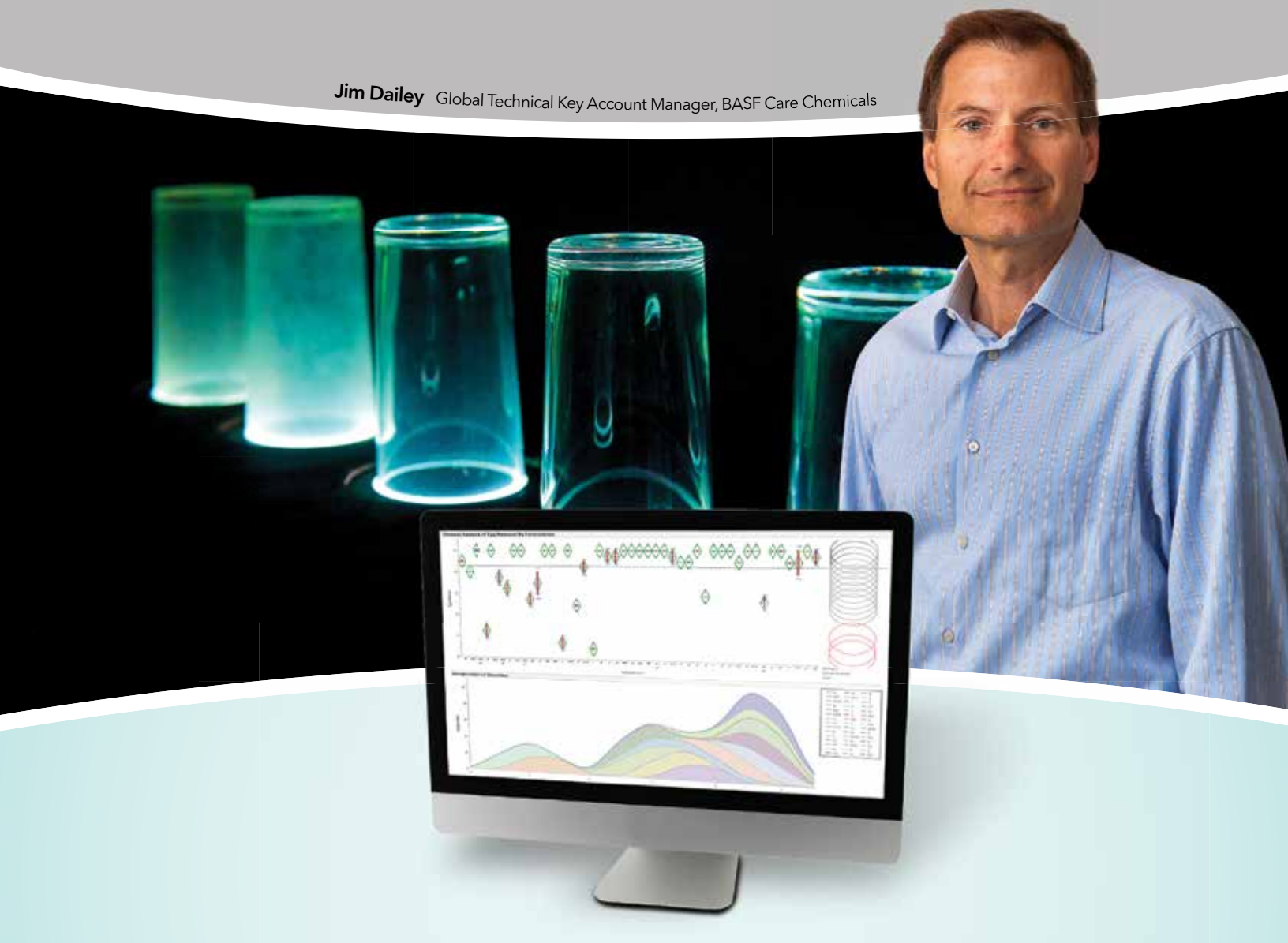

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